S. HRG. 99-679

POTENTIAL IMPACT ON PUBLIC HEALTH FROM GROUND WATER CONTAMINATION

HEARING

BEFORE THE

COMMITTEE ON LABOR AND HUMAN RESOURCES UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

EXAMINATION ON THE POTENTIAL IMPACT ON PUBLIC HEALTH FROM GROUND WATER CONTAMINATION

FEBRUARY 17, 1986, FORT LAUDERDALE, FL

Printed for the use of the Committee on Labor and Human Resources

U.S. GOVERNMENT PRINTING OFFICE

59-818 O WASHINGTON : 1986

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

S541-54

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POTENTIAL IMPACT ON PUBLIC HEALTH FROM GROUND WATER CONTAMINATION

MONDAY, FEBRUARY 17, 1986

U.S. SENATE,
COMMITTEE ON LABOR AND HUMAN RESOURCES,
Fort Lauderdale, FL.

The committee met at 10 a.m., in Broward County Commission Chambers, room 422, 115 South Andrews Avenue, Fort Lauderdale, FL, Senator Orrin G. Hatch (chairman) presiding.

Present: Senators Hatch and Hawkins.

OPENING STATEMENT OF SENATOR HATCH

The CHAIRMAN. This hearing is called to order.

At a time when America's life expectancy at birth has reached a new record high, while a majority of Americans are reportedly healthier than ever, and as our technological capability to manage our natural resources provides us with many options, it is important that the public's safety and health be of primary importance as such decisions are made.

I am pleased to chair today's hearing of the full U.S. Senate Committee on Labor and Human Resources to discuss the human resources' impact of ground water contamination from the proposed construction of a Transgulf pipeline.

Senator Hawkins has once again identified an urgent and sensitive matter affecting all Americans, although Floridians in particular. It complements her longstanding commitment to represent the individual citizen on important issues of public health and welfare. Senator Hawkins is nationally recognized as a catalyst for the identification and locating of missing children. She is a magnificent leader in the U.S. Senate which is demonstrated by her continuing campaign against the evils of child abuse, drug abuse, and other principal threats to America's families. And today, through her encouragement, Congress' consciousness is being raised on a new issue: How to maintain advancements in our industrial and energy producing society without jeopardizing the condition of our Nation's public health and well-being.

The topic of today's oversight hearing will exclusively focus on the potential impact of Florida's environment and public health by the proposed conversion and use of a Transgulf pipeline. The safe construction of this proposed pipeline is of particular interest because of its proximity to a major source of Florida's drinking water. While the Federal Government is already authorized to periodically check the safety of pipelines, State officials are charged

with the responsibility to develop safe monitoring of potential environmental hazards. Although several Federal agencies assist them in this important work, namely: the Environmental Protection Agency, the Department of Transportation, and the Department of Health and Human Services, the principal focus remains within the States. And there is some evidence that the Federal Government is not capable or able to do its share in these areas.

Ground water contamination is a relatively new area of environmental concern. The nature and extent of this problem are as of yet being evaluated. But we have enough scientific information to be certain that much of the ground water in the United States is naturally contaminated, and some of it cannot now be used for drinking water. Further, our existing methods to mitigate total contamination from ground water are questionable.

Our primary concern this morning is to identify a risk assessment model. At what level does contamination of ground water resources pose a potential health risk and how can we prevent high levels of dangerous contamination from invading our total ecological sphere?

In 1983, the U.S. Centers for Disease Control, which is an agency which this committee has legislative oversight authority, determined that there were 40 outbreaks of disease from water-related illnesses that affected 20,905 people. Approximately 42 percent of these cases originated from well water contamination, resulting in illness to 81 percent of the people involved. At this point in time, we do not know exactly what caused each of these outbreaks, or even if they can be entirely prevented. Further research is necessary, primary epidemiological research.

On behalf of the other Senators on our committee, I applaud Senator Hawkins' dedication in helping Floridians, and I look forward to the testimony presented today discussing the Florida Transgulf pipeline's safety standards and their potential impact on the State's water supply.

This is an important hearing on public health and the environment, it is my intention to schedule more of these hearings in the future.

Had it not been for Senator Hawkins the consciousness would not have been raised on this particular issue. Now I turn to you, Senator Hawkins, for your opening statement.

OPENING STATEMENT OF SENATOR HAWKINS

Senator HAWKINS. Thank you, Mr. Chairman.

I would like to welcome you here today, Mr. Chairman, for a hearing into the future of Florida. We live, we feel, in America's most beautiful State. And we have a lot of people here at this time of year to share that with.

Some of my colleagues might argue that this is not the most beautiful State. But consider all the gifts that nature has given this lovely State. We are blessed with a temperate climate, lush forests, lakes, streams, acre upon acre of unspoiled beach front and wetlands that stretch for miles—much of it untouched by man.

These gifts are precious. But they are not free. Our State's beauty—its ecology is fragile. We must remain ever vigilant if we plan to pass these gifts on to our children.

That is why it is so vital that we meet here today to discuss the potential impact on Florida's environment and on public health from the proposed conversion of the Transgulf pipeline.

As everyone in this room knows, the Transgulf pipeline runs just about the full length of Florida, from the Alabama border to Port Everglades. As many of you know our geography, it runs across the Blackwater River State Forest through several great rivers here, Lake Jackson, then through the Ocala National Forest, the Sweetwater Creek, a beautiful place, down through Orlando, through the eastern portion of the Everglades down over the Biscayne aquifer. Quite a scenic tour, and we recommend that if you want to see Florida, you follow the route of the pipeline. It is 26 years old. It now carries natural gas. Yet, under a recent proposal, about 640 miles of this pipeline will be converted to carry oil through Florida.

This raises some serious concerns. The pipeline slashes through the heart of some of our most beautiful lake country and through national forests. But most important, and this is what we are all here to consider, the pipeline runs over our vital sources of drinking water.

Let me give you an example of what this means. Here in Broward County, residents are completely dependent upon the Biscayne aquifer for water. Each drop that we drink in this county comes from the Biscayne aquifer. And the water in which we bathe and the water with which we cook, all of it comes from the Biscayne aquifer. Yet, right here in Fort Lauderdale, the pipeline creeps over that aquifer. A large number of public water supply fields are also at risk. The Biscayne's water table is located very near the ground surface and its recharge zone extends over most of southeast Florida. Any buried pipeline leak would seep immediately into the aquifer system. We all know what that would mean. A mere gallon of oil, 1 gallon, could potentially contaminate up to 1 million gallons of ground water—and it is the ground water that supplies about 85 percent of all the water used in Florida.

There have been some assessments accepted thus far regarding the degree of hazard posed by the conversion. I will state here and now this Senator is not satisfied with those assessments. A Federal evaluation, for example, simply brushed aside the potential health hazards caused by oil contamination. According to this report, a leak, particularly one undetected for days or weeks would be noticed by "possible adverse effects on the odor and taste of the ground water." The odor and taste of the ground water? Nothing about the health aspects of drinking contaminated water. "Possible adverse effect on odor and taste." That was the only potential danger they saw.

Of course, by the time you can smell it and taste it, it is too late. We are talking today about an old pipeline. Already the same pipeline has experienced 16 leaks in Florida alone. The breaks can be seen on a map that will be shown to you.

In other parts of the country, leakage may not pose such a catastrophic threat. However, in Florida it does. Not enough attention has been given to additional safeguards which I believe are neces-

sary to prevent further leaks and to provide the maximum degree of protection to our citizens. I have strong reservations about the detection systems and operational safeguards that are slated to be implemented. What level of protection will be given? That is what we are here for today.

We are here to look at studies conducted subsequent to FERC's approval of the conversion and to explore the regulatory oversight of this pipeline. And many questions need to be asked. Among them:

Are the safety measures developed by Transgulf for the conversion adequate?

If not, what steps should be taken to ensure they are adequate?

What is the real threat posed by the conversion to our environment and drinking water?

What is the regulatory authority for ensuring proper protection prior to operation of the pipeline?

These are only a few of the questions which will be raised today, and what is the first in what I expect will be a series of hearing on this issue. Developments over the past few years demand that we investigate this more thoroughly before we talk about the conversion process. We cannot skimp on safeguards. We must protect our lakes, our natural forests, and our water. There is too much at stake for us not to.

Not everyone, Mr. Chairman, can drink bottled water, and Perrier does not mix too well with infant formulas or reconstitute our milk.

Thank you.

The CHAIRMAN. Thank you, Senator Hawkins.

At this point, Senator Thurmond has asked me to read his statement for the record. He is not only the chairman of the full Judiciary Committee but also an eminent member of our committee.

PREPARED STATEMENT OF SENATOR THURMOND

Mr. Chairman, I thank you for scheduling the full committee hearing on ground water contamination and its impact on public health. The Environmental Protection Agency considers the contamination of underground water as a manmade toxic substance. It is a potentially great threat. It requires an effective strategy in order to safeguard public health.

The deep commitment Senator Paula Hawkins has to issues which affect our national health is illustrated by her leadership in this area. I have had the pleasure of serving with Senator Hawkins on the Labor and Human Resources Committee. As chairman of the Subcommittee on Children, Family, Drugs, and Alcoholism, and in her work at the full committee level, she has served competently and admirably. The citizens of Florida and the Nation can be proud of her hard work, dedication and effectiveness in all her Senate responsibilities.

Ground water is one of our Nation's most important natural resources. It is 50 times more plentiful than all the surface water in the United States. One-half of all United States residents rely on ground water as their primary source of drinking water. Despite the importance of keeping ground water free from contamination, all 50 States have experienced some level of ground water contamination. In 1981, a study by the President's Council on Environmental Quality estimated that serious ground water contamination by toxics and organic chemicals have already occurred in 34 States. Depending upon levels of concentration and length of exposure when ingested, these chemicals can cause health problems ranging from nausea to cancer.

Ground water which is constantly in motion does not recognize State lines. The geology in one State where a waste disposal facility is located may have a great effect on the potential contamination of ground water in another State. Accordingly, it is the health hazards posed by ground water contamination that require a coordinated strategy.

I have had a strong interest in this area for several years. In 1983, I sponsored an amendment to the Department of Defense reauthorization bill, which required a major cleanup and safe disposal of chemical wastes at the Savannah River plant which is located in my home State. In the past, I expressed my deep concerns to EPA officials regarding the need for more effective and thorough Federal regulations of the location of landfills and waste disposal facilities. Issues concerning ground water contamination are extremely complex. Hearings which focus on this general problem, as well as specific ground water contamination concerns which were unique to an area, are helpful in raising the awareness of the public to this crucial and national health issue.

I really regret that scheduling conflicts prohibited my attendance today. I look forward to starting testimony of fine witnesses. I thank the able chairman of this committee for allowing me to submit this statement for the record. I also thank my distinguished colleague from the beautiful State of Florida for her leadership on this issue.

The CHAIRMAN. I might mention that I share Senator Hawkins' regard and admiration for this beautiful State. The people of Florida have welcomed me and I appreciate their warm hospitality.

At this time, I would like to discuss a procedural committee issue. I received a letter from five of our Democratic members of the committee this morning criticizing the scheduling of this hearing as a violation of rule 8 of the Standing Rules of the Senate which requires 1 week's public notice prior to the announcement of a hearing. We did give public notice more than 7 days prior to this hearing. Most of the members who signed this letter are from the Northeastern part of the country, Senators Kennedy and Kerry from Massachusetts, Senator Dodd from Connecticut, Senator Metzenbaum from Ohio.

Paul Simon is from the Midwest. He is the other man who signed, but noticeably two of the Democratic members of the committee did not sign the letter. However, this hearing is being conducted in compliance with the Standing Rules of the Senate.

I have studied the issue of ground water contamination and I anticipate learning from this hearing today. I also have a high regard for the competency and the ability of the company to try to put pipelines across this country. But as I studied this issue, I found some very serious questions about the safety of the pipeline. Senator Hawkins has raised questions fairly. I think she has done so in an appropriate manner, and I look forward to the issues presented in the hearing today. This may not be the last hearing on this subject. I am not adverse to another hearing in Florida, or holding hearings in Washington if necessary.

Now our first witness is Mr. John Mastandrea, president of NDE Technology, Inc., which is dedicated to evaluating and improving pipeline safety.

Mr. Mastandrea has studied the proposed conversion of the Transgulf pipeline in depth and can provide us with some expert insight today.

So, Mr. Mastandrea, we are happy to put you on the stand and take your testimony at this time.

STATEMENT OF JOHN R. MASTANDREA, PRESIDENT, NDE TECHNOLOGY, INC., TORRANCE, CA

Mr. MASTANDREA. Thank you, Mr. Chairman, Madam Vice Chairman.

My name is John Mastandrea, and I am founder and president of NDE Technology, Inc.

We are an advanced technology, consulting and production firm and are dedicated to pipeline safety, risk analysis, and testing services.

We currently employ 6 full-time people—engineers and technicians, and we have 15 part-time engineers and technical people. We are currently under contract, for example, right now to develop a leak detection system for space stations for NASA. Some of the pipeline work we do are—for example, just last week—we carried out a ultrasonic inspection of storage tanks for a chemical company. We performed a pipeline hydrostatic test for a pipeline company. We completed a draft EIR for the city of Santa Monica, CA. And we provided consulting on the All-American pipeline.

So we are not only a consulting firm, we work with the oil companies, we work with refineries, we work with pipeline companies. We know our testing business, we know the pipeline.

I personally have a master's degree in electrical engineering from the University of Southern California and a bachelor's degree from the University of Pittsburgh.

My area specialization for the past 15 years has been pipeline safety, instrumentation and systems, all these involving the oil and gas industry.

I have authored over 40 publications and reports including a number of major Federal Government studies on pipeline safety and leak detection. These studies have been sponsored by such Government agencies as the U.S. Environmental Protection Agency, U.S. Department of Transportation, U.S. Coast Guard, the U.S. Minerals Management Service, the U.S. Navy, NASA, and city and county agencies.

I have developed major technical innovations and state of the art, periodic testing inspecting techniques, and maintenance standards that help provide continuous leak free performance of pipelines.

Our firm has developed a new computerized pipeline hydrostatic testing system that is resulting in the most accurate and sensitive methods of hydrostatically testing oil pipelines. We also developed a new computerized storage tank testing system for volumetric testing for tank leakage.

I have submitted a summary of my qualifications with my prepared statement.

I have conducted many pipeline safety studies and environmental impact assessments for Government and private industry as well. I have also developed a computerized pipeline risk analysis. This model provided the computerized stimulation that was used to compute the spill risks we developed for the proposed Transgulf pipeline.

Because of this model's technical credibility and engineering accuracy, the same method has been used for pipeline risk analysis by a number of firms. For example, it was used on one such major pipelines, the 30-inch diameter, 1,200-mile-long All-American pipeline running from the county of Santa Barbara to McCamey, TX. The pipeline is now under construction.

The analysis has also been used on a Getty pipeline from Delaware to Pennsylvania.

I was retained by private clients to assess the Transgulf pipeline accident potential, and determine measures that could improve the safety of the Transgulf pipeline.

Our firm has published a number of technical documents on the Transgulf pipeline which we have submitted to your staff.

I am concerned about the number of serious hazards and problems created by the Transgulf pipeline and a lack of safeguards on the Transgulf pipeline to prevent, minimize or mitigate such hazards.

The major accident potential of the proposed Transgulf pipeline is due to the unwillingness to reduce the magnitude of the probability of expected pipeline leaks, breaks and ruptures so that they can reach an acceptable level.

For example, the Transgulf pipeline rupture or leak accidents can result in the following serious results:

First, we could have massive spillage of over a million gallons of water from a pipeline rupture or break. The pipeline's instrumentation can only detect leaks of over 12,000 gallons an hour, leaks under 12,000 gallons an hour cannot be detected. Because of these undetected leaks, cumulative leakage of up to 400,000 gallons will go undetected until it is detected either in the ground water or initially coming up on the soil.

These problems I just mentioned create serious hazards. First is the examination of the ground water supply which is the most important issue. Other problems that are created are the pollution of the rivers, streams, beaches, forest lands, and a third problem is the fire explosion hazard because this pipeline is transporting primarily gasoline.

The CHAIRMAN. Mr. Mastandrea, let me just interrupt you.

I want to swear in all witnesses.

Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

[Chorus of I dos.]

The CHAIRMAN. OK. Thank you.

Do you have any objection to the prior part of your testimony being considered as though sworn testimony?

Mr. MASTANDREA. No.

The CHAIRMAN. OK. We will consider it as such.

Please continue.

Mr. MASTANDREA. The most serious problem posed by the Transgulf pipeline is the threat to the ground water. The reason for this major problem is that currently planned leak detection and inspection and preventive mitigation measures for this 26-year-old pipeline are inadequate to prevent the high number of expected leaks and ruptures that could result in major ground water pollution. The potential of massive spillage is a second problem. The reason for this major problem is the pipeline design deficiencies. Examples of such deficiencies are specifications which allows very long distances between the main line valves coupled with inadequate leak protection, especially prevention and mitigation measures.

Alarming to me is the fact that the accident history for the portions of the proposed Transgulf pipeline that will be converted

from a natural gas line to a product pipeline already shows 16 leaks, breaks, and ruptures since 1970. Even more alarming to me are the three accidents that occurred in 1985, which indicates an increase in the accident rate. These accidents were predicted in our study of 1983, the hazard assessment of the Transgulf pipeline.

Although the Transgulf Pipeline Co. has indicated planning some additional safety measures not included in the FERC EIS in 1976 and 1980, these new measures are grossly inadequate to protect the safety and welfare of the public that are exposed to the hazards of the proposed Transgulf pipeline.

The Transgulf pipeline must use state-of-the-art inspection and leak detection and prevention measures that are already in common use in the oil industry to prevent this massive spillage and to minimize the hazards.

Transgulf's saving of money by failing to provide state-of-the-art pipeline leak detection inspection and maintenance is a false economy. Massive costs will result from pipeline spills resulting in major pollution of the Biscayne aquifers and other aquifers in the State of Florida.

Transgulf Pipeline has ignored the problem and threat of massive ground water contamination from a Transgulf pipeline leak or break or rupture. This threat is clearly pointed out in the FERC final environmental impact statement of 1980. Ignoring the threat, or saying it cannot happen, is not the answer of responsibility. The numerous examples of ground water contamination by pipeline leaks and storage tanks leaks in the United States clearly demonstrate how serious the problem is.

The 16 accidents on the present pipeline clearly illustrates that the pipeline has problems. If the pipeline were filled with gasoline instead of gas as currently in the pipeline, some of these 16 accidents probably would have contaminated the ground water.

The gas transported by the pipeline presently will readily disperse in the air if the pipeline is ruptured. Unlike oil, the gas therefore cannot leak and flow miles along the forest lands exposing the environment and the public to fire and explosion, pollution, contamination.

One must remember that the pipeline proposed for conversion is now transporting gas. It is clear that Transgulf's problems is one that most American industry is now addressing responsibly on all fronts. The answer is apply the most up to date measures to protect the safety and welfare of the public and the environment along pipeline route.

I have recommended a number of measures that can work together to significantly reduce the Transgulf pipeline oil spillage. Most of these measures are generally used in the oil and gas industry. I will summarize here the main measures recommended to minimize the hazards presented by the Transgulf pipeline.

The first of the recommendations are annual inspections of the entire length of the pipeline using an electromagnetic inspection pig to inspect for wall thinning, primarily wall thinning for corrosion and other pipeline deficiencies. This type of inspection has been used on over 1 million miles of pipeline, and it is currently used four times a year on the Trans-Alaska pipeline.

This inspection method is the most effective measure currently available for monitoring wall thickness, wall thinning along the pipeline.

The second measure we recommend is annual hydrostatic testing of the pipeline to check for small leaks, as small as 2 gallons per hour. Annual hydrostatic testing is required of all pipelines, for example, in the city of Los Angeles. This includes hundreds of miles of all types of oil pipelines.

Also important to consider is the State of California which requires testing, hydrostatic testing here at intervals of 1 year, 3 years, 5 years for all the intrastate pipelines in the State of California. So it is not a Los Angeles problem or one county law. It is the State of California that requires hydrotesting for all the intrastate pipelines, and many of them are large diameter and long length pipelines, similar to the Transgulf pipeline but not as long as the Transgulf pipeline.

Major pipelines in foreign countries, or pipelines that pose a threat to ground water have annual or more frequent inspections. For example, the Transalpine pipeline in Germany conducts static tests along the whole line four times a year to prevent leaks in the ground water.

The third measure that we recommend are main line valves to be approximately 2 miles apart in the areas where there is a leak or threat to ground water. This preventive measure not only minimizes the maximum spill size during a pipeline break or rupture, but also enables the detection of very small leaks during the pipeline hydrostatic test. In other words, if the valve spacings are 2 miles apart, and you are running a hydrostatic test, you can check very accurately for leaks between that 2-mile section.

The fourth important recommendation is that all valves should be remotely controlled. Remote control that operates the main line valves is common practice for gasoline and crude pipelines, particularly in high risk areas. It is critical to be able to turn the valves off immediately when an accident is determined to have happened. In many cases, the pipeline may be a very long pipeline, very difficult to get to the valves to turn them off. It may take hours, typically, 1 to 10 hours, to turn a valve off manually. And that is why we recommend remote operated valves—the valves are controlled remotely.

Another item that we recommend is that the pipeline valves, main line valves, have fire safety, that they be fire safety certified main line valves. This may eliminate the problem of valves malfunctioning due to heat from fires close to the valve during a pipeline accident. For example, if a pipeline were to rupture and break and a fire started near a valve, it is very possible unless it is fire safety proof that that valve will not operate. It will not close but would remain open and allow oil to come or gasoline to flow through the valve—and actually fuel the fire from the pipeline breaks. So this is very, very important item to include.

Another item are no leak main line valves. No leak main valves should be installed to eliminate the common problem of leakage through main line valves which generally renders the valves useless during the hydrostatic test. In other words, the valve should have a no leak specification in them that they will not leak. This

eliminates one of the main problems that is in pipeline hydrostatic testing.

Another important consideration that we are recommending is a semiannual pressure test on the pipeline in areas where the ground water contamination is possible from a leak.

Semiannual pressure tests should be carried out at the maximum operating pressure of the pipeline. The valves will be closed by remote operation. At least 2-mile sections will be accurately monitored by accurate pressure and temperature instrumentation. The tests would be conducted by an independent testing firm. The technique provides for checking for existing leaks.

This recommended measure is not an actual preventive measure. If you do not test the pipeline at 125 percent of operating pressure as required by the hydrostatic testing, you test the pipeline at the normal operating pressure with the normal fluid in the pipeline so that you can check for leaks in the pipeline by running a static test of the pipeline. And so it is an additional measure in addition to the hydrostatic testing.

Another recommendation is double wall piping in areas where the Transgulf pipeline traverses ground water. Double wall pipeline is very important in high risk areas such as the nuclear reactor vessels or an L&G pipelines. In cases where the pipeline has actually been in the aquifer—in the water—we recommend double wall piping. In other areas, we recommend heavy wall 0.5-inch wall thickness pipe. The normal wall thickness of the pipe is about one-quarter inch so we recommend doubling that wall thickness.

Now, the reason for this is that it significantly reduces the chance of a corrosive pipe causing leakage. Now this is done in the Transgulf pipeline already where it crosses water, rivers, streams, you have heavier wall pipe. And so we recommend that the same protection be given to the areas where the pipeline will enter near the aquifers. Because it is just as important—in fact, it is more important to protect the ground water than it would be to protect the rivers. Oil spilled into the river would go into the ocean. In the case of the ground water, oil spilled would go directly into ground water affecting the drinking water.

The 11th item that we recommend is annual monitoring of the surface above the pipeline for leaks using a line walker with a hydrocarbon probe leak monitoring. This hydrocarbon probe leak monitoring equipment is in common use by many of the pipelines to periodically test the pipelines for leakage. This technique can detect small leakage. And it is a common practice, for example, on military gas pipelines to carry out annual hydrocarbon gas monitoring surveys.

Monitoring wells should be provided for use in the areas where the pipeline has the risk of contaminating major ground water. We are now using monitoring wells that are installed under gasoline storage tanks or under storage tanks to protect the ground water. Monitoring wells under the Transgulf pipeline would be equally effective.

One must remember that the Transgulf pipeline itself is equivalent to 10,000 to 20,000 gasoline storage tanks as far as its capacity.

The CHAIRMAN. 10,000 to 20,000 you say?

Mr. MASTANDREA. That is true.

The CHAIRMAN. That is a lot of storage tank.

Mr. MASTANDREA. That is right.

The pipeline has a capacity of 120,000 gallons per mile and the pipeline is approximately 900 miles long.

The CHAIRMAN. How often do they have checks on the pipeline did you say?

Mr. MASTANDREA. Excuse me?

The CHAIRMAN. How often do they have safety points of inspection and checks on the pipeline?

Mr. MASTANDREA. Right now they propose only primarily visual inspections of the pipeline once a week.

The CHAIRMAN. How often do they have to shut off valves?

Mr. MASTANDREA. Right now the only way we have—the only records we have, the only public information we have is in the FERC studies. The FERC EIS studies in 1976 and 1980 show that the pipeline spacing ranges between 4 and 27 miles. It is documented in the FERC EIS reports.

The CHAIRMAN. They could still have between 4 and 27 miles between valves, shutoff valves?

Mr. MASTANDREA. That is where they are right now.

The CHAIRMAN. But they have to be computerized shutoff valves then?

Mr. MASTANDREA. No. Right now, as far as the FERC EIS study, it said that they would be manually operated.

The CHAIRMAN. Manually operated?

Mr. MASTANDREA. Now, since the FERC EIS in 1980, Transgulf pipeline has stated that some valves will be remotely operated—some of the valves--you know, it——

The CHAIRMAN. Not all of them?

Mr. MASTANDREA. But there is no public statement by Transgulf showing where the valves are.

The CHAIRMAN. You mean when this project was approved they would have shutoff valves manually operated, with between 4 and 27 mile valve spacing?

Mr. MASTANDREA. That is correct. And when——

The CHAIRMAN. Tell me how many gallons are stored and transported through the pipeline?

Mr. MASTANDREA. The pipeline is equivalent to 120,000 gallons per mile. A typical storage tank holds about 5,000 gallons of gasoline so that would be approximately 20, let us say 20 gasoline stations would be equivalent to that 1 mile.

What I am saying is that the contents of that pipeline, the amount in that pipeline——

The CHAIRMAN. That is a lot. That is quite a bit to have that kind of spacing without an automatic shutoff valve.

Mr. MASTANDREA. That is right.

Now, as an example, the gasoline storage tanks in the United States——

The CHAIRMAN. Well, I come from an energy State, and what I am having trouble with is why the Audubon Society and the Sierra Club, which are down on everything that I say, why, all of a sudden, they are supporting this pipeline conversion?

Mr. MASTANDREA. It is amazing to me because, you know, we had this sensitive ground water——

The CHAIRMAN. Well, I am going to ask the Audobon Society. I think they are going to testify here today.

But from what I have learned there must be some changes made.

Mr. MASTANDREA. Well, we compared the gasoline storage tanks with the pipeline. In California, we are one of the companies, we actually do—we do testing of gasoline storage tanks. We have a system to do that.

California requires tests of storage tanks for leakage twice a year, and they——

The CHAIRMAN. I understand.

Mr. MASTANDREA. They tested the one little small storage tank.

The CHAIRMAN. I hope you are wrong on the status.

But you are recounting the current facts as they existed when the conversion applications were approved by the State and Federal Governments.

Mr. MASTANDREA. That is correct.

The CHAIRMAN. Well, I believe there will have to be some changes.

Mr. MASTANDREA. Additional measures are we recommended pipelines be located so as to avoid the surface water and ground water supplies, reservoirs and contamination. Such locations will be based on an analysis of a maximum spill pattern for a pipeline major break.

We recommend that the continuous monitoring in the pipeline to detect and locate leaks and ruptures; that they use the best available mathematical monitoring system. Transgulf pipeline, the technique they—they are now recommending to use it. They are not using the most accurate and the most sensitive.

The CHAIRMAN. As I understand it, this is a preexisting pipeline. Right?

Mr. MASTANDREA. That is correct.

The CHAIRMAN. And this was first put in and finished in 1959?

Mr. MASTANDREA. That is right. Approximately that time.

The CHAIRMAN. So it is about 26 years old?

Mr. MASTANDREA. That is right.

The CHAIRMAN. It was first put in for the purpose of natural gas?

Mr. MASTANDREA. That is correct.

The CHAIRMAN. Natural gas is not—is not a hazard for public health?

Mr. MASTANDREA. That is right.

The CHAIRMAN. Now, what petroleum products go through this pipeline?

Mr. MASTANDREA. Gasoline is primary product which is transported through it, approximately—I think about 90 percent.

The other products would be jet fuel, which is——

The CHAIRMAN. Jet fuel?

Mr. MASTANDREA. Yes; there would be really two more left. One, we recommend a backup communication for the remote operation of main line valves. In other words, it is very possible that the system may not work due to bad weather. Florida sometimes has rough weather. We recommend that there be an alternate backup system to remotely control these valves.

We also recommend backup power supplies at the stations where these valves are located.

A couple of concerns that I have recently found and I want to address. One is that the—the determination of maximum surge pressures on the Transgulf pipeline so that the pipeline does not have surge pressures exceeding the 10-percent maximum surge pressures that is required by law.

In a statement by Mr. Stanley, who is the chief engineer of Transgulf Pipeline Co., he is the chief engineer, and I want to mention here that he is not certified in the United States as a registered engineer. Mr. Stanley stated that the worst case surge currents could be 300 pounds over the maximum operating pressure of 953 psi, or 1,253 psi.

Now, this 1,253 pounds exceeds the Federal law requirement. We would normally expect that 10 percent to be 1,048 pounds so that, based on his statement, his documented statement in deposition, he stated that there is a certain condition where the pipeline could exceed this 10-percent maximum surge pressure.

Now, this presents a very serious hazardous condition on the Transgulf pipeline. And if it turns out to be true, his statement turns out to be correct, that is a serious problem. And one of the things he did mention in his deposition was the fact that, well, if it goes 300 psi over the maximum operating pressure, the pipe would expand a little bit but it would not burst.

Well, if a pipe expands, you must take it out of service because it is then a defective pipe after that time. So this is a very serious consideration I think that should be checked.

The last item we are recommending is that the pipeline depth of burial should conform to the specifications as provided in the Code of Federal Regulations, at this time 1986, not in 1959 when it was built.

The Transgulf pipeline, again Mr. Stanley, in his deposition, stated that the pipeline was approximately buried a distance of approximately 30 inches. Well, the new laws require that the pipeline be buried at 36 inches in industrial areas, in commercial areas, and in residential areas. And it is possible that the pipeline does not meet that requirement, and I think it is important that it be checked to make sure. Because the reason they have that depth of burial is to protect the pipeline from being damaged from external outside activities by construction activities and so on. And that is why they set that level.

Now, I would think that Transgulf pipeline would attempt to have a waiver be made on that issue. But I think it is important that the—by FERC—and I think it is important that particular pipeline depth be checked.

Now, even though we have given all these 18 recommendations of the best prevention technology that exists today, it is important, primarily because this pipeline goes through ground water and aquifers. We are not picking on this Transgulf pipeline as a special pipeline to pick on; we are picking on it because it is in a special situation, it is in a special area where there is ground water, there is major ground water in the State of Florida.

If this pipeline were in another area, these measures in all probability, would not be needed. Some of them would be, but not the magnitude in numbers we have here. It is a special situation be-

cause the Transgulf pipeline is located in or near major ground water areas and sole source aquifers.

Even with these recommended measurements, we do not think that the pipeline should be allowed to pass over Florida's most environmentally sensitive public drinking water through the aquifers because the aquifers cannot be totally protected, even with all these measures. What you could do would be to reduce the potential of a leak or rupture. However, you cannot guarantee that a leak will not happen, and that is a consideration that should be made.

That is the end of my testimony.

The CHAIRMAN. Thank you

Let me just ask you a few questions here today.

Your analysis of other pipeline leakages, what do you anticipate would result from a leak in the proposed light petroleum products pipeline? What types of public health effects would occur if there are leaks that occur on that?

You can talk about various subjects if you like but, as I understand it, this makes three major river crossings in Florida, the Apalachacola River near Sweetwater Creek some people call it environmentally endangered land; the Escambia River and the Swannee River, in fact it makes over 25 river, creek, and canal crossings. It overlies the Floridian aquifer so much that it jettisons a significant portion of the Biscayne, the shallow Biscayne aquifer. It goes through a lot of national forest land, the Blackwater Forest, the Apalachacola Forest, DeKalb Forest, and the game refuge, and then it will pass through much of Florida's lake country, as I understand it.

I personally do not have any problems with pipeline transmission as long as you have necessary safeguards to protect against leakage. I believe that is Senator Hawkins' concern as well.

But it will also pass through the lake country, through the Kissimmee storage terminal a few miles away, and then it passes through a number of populated areas, including Orlando, Jacksonville, Fort Lauderdale, and Port Everglades.

Now, what types of public health effects could occur if there are leaks in any of these areas?

Mr. MASTANDREA. Of major concern, of course, it is impossible to protect, for example, the Biscayne aquifer for leaks——

The CHAIRMAN. What do you mean it is impossible to protect?

Mr. MASTANDREA. Well, for example, if it leaks, it is in the aquifer itself. You cannot prevent against leaks and ruptures because the pipeline already—that section proposed for conversion already has approximately 16 leaks, breaks and ruptures already over a 15-year period. There is not going to be any major changes in the pipeline which will—if we do what we recommend, that will reduce it maybe down to a much smaller number for the next 15 years. But there still will be some. And that is a real concern.

Now, if some of the measures are taken care of, like we had double wall pipe, that would eliminate that problem. But I guarantee you the Transgulf pipeline will not do that due to the expense of the pipe because you have to have basically double the cost of the pipe in the pipeline.

But one of our concerns, for example, Camp Dresser and Magee, they are a firm that does analyses on ground water, and they were the firm that did the analysis that coupled in our study, they did an analysis of the potential of ground water contamination, for example, in Broward County. And in their study, they show that six major well fields affecting approximately 420,000 users in Broward County may be affected because of possible pollution from the Transgulf pipeline.

I would like to note that Transgulf Pipeline Co. has not taken issue with the CDM conclusions. So we have here a real serious concern right here in Broward County, six wells that could be contaminated from a leak or a break or a rupture.

So our main concern, first of all, is the drinking water through aquifers. Other concerns, of course, are the rivers and the streams. For example, there have been a number of accidents along the Transgulf pipeline, for example, in Louisiana and Texas, where the pipeline ruptured and contaminated—well, there were ruptures at the river due to floods, the pipeline broke and ruptured. Now, if there were oil in that pipe, gasoline in that pipeline, there would be massive pollution of the water and all the areas along the path.

The CHAIRMAN. Have you done any cost benefit analysis on the additional safety features you have recommended? In other words, are the costs so out of line that literally a pipeline company could not be expected to undertake?

Mr. MASTANDREA. The cost benefits are—actually if you look at the case—let us say you contaminate the Biscayne aquifer and you cause 500,000 people to be without water for an indefinite—maybe years--where they have to get an alternate source of water shipped in.

Those costs, we did an estimate of those costs of that pollution, and that could range as far as up to as much as $200 million. So the costs of major ground water pollution can be very expensive.

So the measures that we are recommending, they are capital costs, most of their capitalization costs. Let us say they would cost perhaps say $200 million, in that range. I do not know the exact number.

The capitalization costs they can charge off over a period of time. The annual inspections are a lower cost, and those may be in the range of maybe $50 million. I am not sure of the number because I am not an economist. But, from my background, I assume it may be in that range. It is anywhere from $10 million.

The CHAIRMAN. You have listed basically four areas of basic safety standards that you would like to see.

Do you consider them modest requirements or do you consider them heavy requirements of the pipeline company in light of what you have described as potential destruction which could have occurred or might occur if these safety features are not installed?

Mr. MASTANDREA. Well, I think these four safety features are absolutely critical and should be done for the pipeline.

The CHAIRMAN. Are some of the problems of the pipeline maybe due to human error? Is that a potential problem here and, if so, are you aware of the training of pipeline operators and maintenance personnel, and could you describe it to us?

Mr. MASTANDREA. Statistics show that a very small percentage of the accidents are actually due to personnel error. I think it is about 5 percent. It is a small number.

Primarily the accidents of pipelines are due to—for example, 50 percent of the Transgulf pipeline or the gas pipeline accidents are due to external outside activities, excavation equipment, and so on. This is something that is very difficult to prevent against. No matter what measures be taken, the problem still occurs. And so that is one of the main problems with the pipeline, pipelines in general.

So that as far as personnel errors, I think it is something you can live with, 5 percent errors as far as the accidents.

The CHAIRMAN. The Federal Government has the authority to regulate interstate oil pipeline safety through the Federal Energy Regulatory Commission [FERC], the Office of Pipeline Safety of the Department of Transportation.

In addition, the Department of Transportation established the regulations as authorized by the Hazardous Liquid Pipeline Safety Act of 1979. And the Department of Transportation has the authority to enforce safety.

Is it correct to say that the Department of Transportation normally limits its involvement to inspecting accidents and requiring an initial hydrostatic test?

Mr. MASTANDREA. It could be—for example, the Code of Federal Regulations by Department of Transportation are minimum requirements. And these minimum requirements, they apply to all interstate pipelines nationwide. And the requirements, they are the same whether the pipeline is 2 inches in diameter or 20 inches in diameter. Thus, a pipeline that poses a special problem, like the Transgulf pipeline, it is a special case, and special regulations have to be made, and the general regulations by the FERC—by the Code of Federal Regulations really are not adequate to protect against this special case.

The CHAIRMAN. Is it correct that there are some 2,000 pipeline accidents which occur annually.

Mr. MASTANDREA. That is correct.

The CHAIRMAN. And the Department of Transportation only has two inspectors?

Mr. MASTANDREA. That is right.

The CHAIRMAN. So we count on the Federal Government to inspect the pipelines and they can inspect 20 to 25 pipelines a year?

Mr. MASTANDREA. That is right. They can only inspect about 25 so roughly about 1 percent.

The CHAIRMAN. So we rely on the Federal Government to make sure that Florida is safe—especially when they can inspect only 1 percent of our Nation's existing pipelines?

Mr. MASTANDREA. If there is a leak in the aquifer, for example, it is going to take a year to analyze it as to what happened. So then——

Senator HAWKINS. Excuse me, Mr. Mastandrea. You keep saying if there is any leak in the aquifer.

Is there any way to clean up an aquifer if oil gets in it?

Mr. MASTANDREA. Right now there is no way to a hundred percent remove the contaminants, such as gasoline, from a contaminated aquifer.

There have been a lot of studies in recent years on that particular issue, a lot of systems built up, and in certain cases, I think it is the best case, they can remove maybe 50 percent of it. But if it is a major aquifer, they will be pumping water out and filtering it forever. And it turns out the cost is to clean up—for example, I think it cost roughly $4 for every gallon of water that had to be filtered and cleaned of the contaminated area. So that the cost can become incredibly large if you are concerned in aquifers. And so the likelihood of the cleanup cost, to spend that kind of money is—and I do not know if Transgulf Pipeline Co. has that kind of money if they are going to pay $4 for every gallon they have to clean up plus the other pollution costs. It is an incredible amount.

The 8CHAIRMAN. That is assuming there is a break in the pipeline.

I believe that we should underscore the notion that some people are relying on the Federal Government to monitor adequately pipeline safety through the Department of Transporation which has limited responsibility here.

The 2 inspectors, as I understand it, can inspect 25 pipelines a year, and there are 2,000 problems or accidents a year.

FERC, the other regulatory body, they just grant license for abandonment. For instance, aside from permits which have to be granted by the Corps of Engineers, environmental considerations are not subject to regulations by the Federal Government. So the environmental considerations have to be regulated by the Florida Department of Environmental Regulations. Am I correct in that?

Mr. MASTANDREA. I think that is correct.

The CHAIRMAN. OK.

I believe that in the FERC Federal Environmental Impact Study and supplemental, very little attention is paid to the unique environmental setting and the impact of the Transgulf pipeline. Have you read this report?

Mr. MASTANDREA. I have read it a number of times.

The CHAIRMAN. And it is also my understanding that today the Florida Department of Environmental Regulations have yet to conduct an extensive analysis of the impact on drinking water in the State and in other environmentally sensitive areas along the route of the pipeline.

Now, it is a real question whether the Florida Department of Environmental Regulations even has an expert on pipeline safety. But the Department of Environmental Regulations are going to be the ones required to issue the permits?

Mr. MASTANDREA. I am not sure.

The CHAIRMAN. I will ask another witness then.

As I understand it, the Florida Department of Environmental Regulations is to work with the pipeline to ensure safety. And I presume they will do that.

Mr. MASTANDREA. It is the State of Florida's responsibility, I think, in the environmental issues. And we have a very—our studies that we did on the hazard assessment of the Transgulf pipeline is very detailed. And it goes into the specific problems.

We talked to the State officials and recommended that they get consultants, even recommended consulting firms that could do that type of thing. But we considered the extent and no one is acting on it.

We would really like that our study be really looked in depth by an independent company. It is for the Transgulf pipeline issue. And we would welcome that.

The CHAIRMAN. You are willing to debate anybody on that?

Mr. MASTANDREA. I will debate anybody. The analysis we used, the analysis is used on a number of major pipelines, the analysis is very accurate. It is the best analysis available in the industry today, and people use it all the time.

The same analysis, for example, was used on the All American pipeline and the Getty pipeline, and others. So Transgulf pipeline people keep on saying they are upset about the analyses. But when it has been applied to other pipelines successfully, the All American pipeline analysis has been used and its pipeline is now under construction.

The analysis that we have in an accurate, the best analysis available today. And we welcome people looking at that analysis.

The CHAIRMAN. Thank you.

We appreciate you being here and we will take note of what you have said.

Our next witness will be Mr. Allan D. Dorris, the president of Transgulf, Winter Park, FL.

Mr. Dorris, we welcome you to the committee, and we are happy to have Mr. Ralph Workman, the chairman of your company with you as well. Mr. Workman, will you introduce Mr. Dorris?

Let me swear both of you in.

Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

Mr. DORRIS. I do.

Mr. WORKMAN. I do.

The CHAIRMAN. Welcome to the committee, and we will turn it over to you, Mr. Workman.

STATEMENT OF ALLEN D. DORRIS, PRESIDENT, TRANSGULF PIPELINE CO., WINTER PARK, FL, ACCOMPANIED BY RALPH WORKMAN, CHAIRMAN

Mr. WORKMAN. Thank you, Mr. Chairman, Senator Hawkins.

My purpose is to represent the parent company of Transgulf and to introduce Mr. Dorris. Mr. Dorris is the president of Transgulf Pipeline Co. He joined Transgulf Pipeline Co. in 1979, and has been involved in the projects development since that time.

Before joining Transgulf, he was employed for 31 years, starting in 1948, with the Standard Oil Co. of Ohio. During that period, he started as a junior engineer and retired as the president and director of Sohio Pipe Line. During his period as president of Sohio Pipe Line Co., the Trans-Alaska pipeline system was built. Sohio Pipe Line was an owner of one-third of that pipeline.

Mr. Dorris, I daresay, has more experience in operating liquified lines of this sort than anyone in this State. And he has a statement which he will personally give.

The CHAIRMAN. Thank you, Mr. Workman.

Mr. Dorris, we will be happy to take your statement. We have great respect for your company.

Mr. DORRIS. Thank you, Senator.

Twelve years ago, in January 1974, this was before the FERC existence, Florida Gas applied for permission to the Federal Power Commission to modify one of its pipelines in Florida to handle natural—to continue to handle natural gas and to take the smaller line, the 24-inch line, and convert it to petroleum products service.

As Mr. Workman has indicated, both Florida Gas Transmission and Transgulf Pipeline are subsidiaries wholly owned of HNG/InterNorth.

Rather than go through the details, we have a brochure that describes the pipeline in great detail.

The CHAIRMAN. We will be happy to make that brochure a part of the record.

[EDITOR'S NOTE.—Due to printing limitations, the brochure referred to was retained in the files of the committee.]

The CHAIRMAN. In fact, we will put all statements in for the record as though fully read. We would appreciate a summary at this time.

Mr. DORRIS. During 9 years before the FERC, exhaustive and exhausting hearings and deliberations were held. The pipeline, during all this period, has enjoyed a great deal of support from its potential shippers, from the State of Florida, and numerous other governmental, city, environmental, and business groups. I really believe that all of the significant environmental issues have been aired through these long hearings and through the preparation of not one but two complete environmental impact statements. And these studies led to the approval of the project by FERC, and this decision was upheld by the circuit court of appeals.

It is really unlikely that any project that has ever been undertaken in Florida has been subject to a more intensive environmental review than this project. I really believe that very few industrial projects ever built in the United States have had the review that this project has already undergone.

I think it is important to understand that not only Federal agencies have been involved in the studies, but many State agencies. Just talking about Florida, though similar types of activities were carried on in all 4 States, in Florida 16 State and local government agencies participated in the preparation of the environmental impact study. Some of these agencies were the Florida Department of Natural Resources, the Department of Environmental Regulation, the Department of State, the Department of Transportation, Department of Commerce, Department of Pollution Control, and the Agriculture and Consumer Services. The Game and Freshwater Fish Commission in the State of Florida participated as did Regional Planning Councils of North Central, Northeast Florida, and South Florida.

This record is huge. There have been literally thousands of pages of sworn testimony and hundreds and hundreds of exhibits. The Federal Energy Regulatory Commission staff examined all of the possible environmental impacts of the project not only in Florida,

but also in Mississippi and Alabama and Louisiana, the other States crossed by the pipeline.

Transgulf was repeatedly found to be in the public interest, in terms of its environmental soundness, economic benefits to the consumers of Florida, and the enhanced economic development possibilities for the State. As I mentioned, in July 1983, the Federal Energy Regulatory Commission issued its final decision approving the project.

After extensive review of the project leading to this decision, I think one statement summarizes that decision, and I quote,

> The limited injury which maritime interests may suffer is an unavoidable result if the public at large is to reap the much larger benefits of increased competition, improved energy security, energy savings and cost efficiency which the Transgulf pipeline can provide.

The primary opposition to the pipeline project has come from a small group of maritime special interests who have been trying since 1974 to delay or stop the project. And they very simply want to do this to conserve their monopoly on the transportation of petroleum products in the State of Florida.

During the FERC hearing, this group was known as the Maritime Intervenors.

Following approval of the pipeline by FERC, this group appealed that decision to the U.S. Circuit Court of Appeals in the District of Columbia, but this decision, the FERC decision, was unanimously upheld by that court.

Unfortunately for Transgulf and the citizens of Florida, the appeals court decision did not end the opposition by the maritime group. They had earlier formed a group called the Florida Alliance. This began as a small group of people in the maritime industry who desired to prevent the pipeline proceeding.

The Florida Alliance has relied heavily on a report Mr. Mastandrea just described for you. This study as a part of maritime's case was presented to FERC, and the entire study was carefully evaluated by the FERC staff and rejected by the FERC.

In its report about this study, the FERC staff recounted the extensive hearings and reviews to which the pipeline project had been subjected during the previous 9 years, and it listed the many local, State and Federal agencies that had evaluated the project. The FERC staff noted that those other numerous Government bodies supported the conclusion of FERC's environmental impact statement, and they added, in their words, I quote:

> It is these agencies which are responsible for the health and safety of persons most affected by the pipeline. The NDE study was, on the other hand, prepared by a corporation in Torrance, California, for an undisclosed fee to be paid by opponents and competitors of the proposed pipeline.

Having lost its case against Transgulf on its merits in every forum in which they had been contesting, the Florida Alliance has continued its opposition at the State, county, and municipal levels. And they have been successful in delaying the project and increasing its cost to the disadvantage of the people in the State of Florida.

The pipeline, which is expected to begin operation in 1987, will employ proven state-of-the-art technology and will comply fully with the Department of Transportation's regulations which are the

standards for liquid pipelines in the United States. These standards, as you know, cover every significant element in the siting, design, construction, testing, operations and maintenance of all interstate pipelines in the United States.

But, in addition to the Department of Transportation standards, we must meet all of the pipeline industry safety standards and comply with a whole family of rules and regulations of the Environmental Protection Agency. We will also operate under a myriad of national and State standards and specifications, such as electrical standards, those relating to fire protection, Coast Guard regulations covering oil spills, Army Corps of Engineers regulations on crossings of navigable water, et cetera.

Further, during the construction of the pipeline, Transgulf will be required to obtain literally hundreds of State, local, and county permits throughout Florida. Moreover, Transgulf as a part of the FERC hearing has agreed to comply with a great list of environmental protective conditions stipulated by FERC.

In view of all these reviews that have taken place, the stipulations which we have agreed to, and the many studies of the project, it should be noted that not one of the additional safeguards proposed by the consultant for the Florida Alliance has been adopted by any agency having the responsibility for the safety of interstate pipelines. I personally believe the standards proposed will not in any way improve the safety of the Transgulf pipeline.

Transgulf is made of high tensile strength steel. The pipeline has been cathodically protected, coated and wrapped, and it has been protected since the day it went into the ground. The pipe in the pipeline meets API specification 5-LX-52. This is a current standard, and the pipeline must meet all present applicable standards and regulations before being put into products service. It must meet exactly the same standards that a new pipeline built today would meet.

Transgulf will be remotely controlled from a control center located at Kissimmee. This supervisory control system will be the most modern system in the world.

The CHAIRMAN. Does that include all valves?

Mr. DORRIS. It does not include all the valves. And I will be glad to speak to that.

The CHAIRMAN. In other words, some of the valves will have to be manually operated?

Mr. DORRIS. That is correct.

In addition to primary and backup computers, the pipeline will have redundant leak detection systems. Meticulous inventory monitoring systems, which are highly accurate, will be complemented by a dynamic computer modeling system that will provide instantaneous and continuous line balancing. And among other leak prevention and detection measures will be a minimum of weekly surface inspections.

There are more than 230,000 miles of pipelines serving the United States. I might mention that there are several other pipelines right here in Broward County serving the public, and they have been serving the public for many years.

These pipelines throughout the United States transport a total of about 28 million barrels of petroleum daily. The National Trans-

portation Safety Board's statistics clearly show that pipeline are by far the safest mode for transportation of petroleum.

When Transgulf begins operation in 1987, it will be the most modern petroleum products pipeline in the world. This is true not only because it is the latest one, but because it will incorporate the best and latest state-of-the-art technnology and equipment.

I will be pleased to answer any questions now or for the record.

[The prepared statement of Mr. Dorris follows:]

TESTIMONY OF ALLEN D. DORRIS, PRESIDENT OF
TRANSGULF PIPELINE COMPANY
BEFORE THE FAMILY, CHILDREN, DRUGS, AND
ALCOHOLISM SUBCOMMITTEE OF THE SENATE
LABOR AND HUMAN RESOURCES COMMITTEE
February 17, 1986
Fort Lauderdale, Florida

I am Allen Dorris, president of Transgulf Pipeline Company, Winter Park, Florida. I hold a bachelor's degree in civil engineering from the University of Oklahoma. I began my business career as an engineer with Sohio Pipe Line Company in 1948. When I retired from Sohio Pipeline in 1979 I was the company's president and director. Sohio Pipe Line owns approximately one-third of the Trans Alaska Pipeline System, which was built while I was president of Sohio Pipe Line. I joined Transgulf in 1979 as vice president and became president in 1981. I am a member of the American Petroleum Institute Central Committee on Pipeline Transportation.

More than 12 years ago, in January 1974, Florida Gas Transmission Company (FGT) filed an application with the Federal Power Commission, forerunner of the Federal Energy Regulatory Commission (FERC). What the FGT application essentially sought was to allow the company to make modifications to the larger of two parallel natural gas pipelines and then transfer the smaller line to the Transgulf Pipeline Company for conversion to transport light petroleum products to Florida markets. Both FGT and Transgulf are subsidiaries of HNG/InterNorth. Printed materials describing the Transgulf project in some detail are attached.

During more than nine years of exhaustive hearings and deliberations before the FERC, the Transgulf project has had broad support, including that of prospective shippers, the State of Florida, and numerous governmental, civic, environmental and business groups. All of the significant issues involved in the Transgulf conversion project were addressed in great detail in two comprehensive environmental impact assessments, and, in addition, in numerous hearings, briefings and court proceedings.

It is unlikely that any other project in Florida's history has been subjected to more intense environmental scrutiny than the Transgulf Pipeline. In fact, Transgulf's environmental reviews rival those for any major industrial project in the United States. As an example, not only was the State of Florida a party to the proceedings before the FERC, but 16 state and local government agencies actively participated in the environmental impact assessments. Among them were the Florida Departments of Natural Resources, Environmental Regulation, State, Transportation, Commerce, Pollution Control, and Agriculture and Consumer Services; the Game and Freshwater Fish Commission, and the

Regional Planning Councils of North Central Florida, Northeast Florida and South Florida.

In the process of compiling the extensive record of many thousands of pages of sworn testimony and literally hundreds of exhibits, the FERC painstakingly examined every possible impact of the conversion project not only on Florida, but on Louisiana, Mississippi and Alabama, the other states to be traversed by this interstate pipeline. Transgulf was repeatedly found to be in the public interest--in terms of its environmental soundness, economic benefits to the consumers of Florida, and enhanced economic development in the state--and in July, 1983, the FERC issued its final decision approving the Transgulf conversion project.

After extensive review of the facts concerning the Transgulf Pipeline project, the FERC affirmed that: "The limited injury which maritime interests may suffer is an unavoidable result if the public at large is to reap the much larger benefits of increased competition, improved energy security, energy savings and cost efficiency which the Transgulf Pipeline can provide."

The primary opposition to Transgulf came from a small group of maritime special interests who have been trying since 1974 to protect their monopoly for transporting petroleum products to Florida. This group, known as the Maritime Intervenors, opposed Transgulf throughout the FERC hearings. Following the FERC approval of the pipeline in 1983, the Maritime Intervenors filed an appeal of that decision in the U.S. Court of Appeals for the District of Columbia Circuit. It is important to note that the Appeals Court unanimously upheld the FERC decision.

Unfortunately for Transgulf, and for the citizens of Florida, that Appeals Court defeat did not mark the end of opposition by the maritime special interests. Earlier they had formed an organization known as the Florida Alliance. Headquartered at Port Everglades, this small group of out-of-state and Florida maritime interests continues to try to prevent competition from the pipeline.

The Florida Alliance has relied heavily on a report prepared by a west coast company, NDE Technology, Inc. In 1983 NDE produced "Hazards Assessment of the Proposed Transgulf Pipeline." This study, to include its methodology and conclusions, was carefully evaluated and then rejected by the FERC. In its report about the NDE study, the FERC staff recounted the extensive hearings and reviews to which the Transgulf project had been subjected during the preceding nine years and listed some of the many local, state and federal agencies that had reviewed the project. The FERC staff then noted that those numerous government bodies supported the conclusions of the project's Final Environmental Impact Statement, adding, "It is these agencies which are responsible for the health and safety of persons most effected by the pipeline. The NDE study was, on the other hand, prepared by a corporation in Torrance, California for an undisclosed fee to be paid by opponents and competitors of the proposed pipeline."

Having lost its case against Transgulf on its merits in every forum in which it has been contested, the Alliance has continued its opposition at the state, county and municipal levels. The Alliance's only success has been the delay and increased costs it has forced on Transgulf and the public in Florida.

The Transgulf Pipeline, which is expected to begin operation late in 1987, will employ proven state-of-the-art technology and will comply fully with the U.S. Department of Transportation's (DOT) "Minimum Federal Safety Standards for Liquid Pipelines - Part 195, Title 49, Code of Federal Regulations." That exacting standard covers every significant element in the siting, design, construction, testing, operation and maintenance of an interstate petroleum products pipeline.

In addition to the demanding DOT and pipeline industry safety standards, the Transgulf Pipeline will comply fully with a family of rules and regulations promulgated by the Environmental Protection Agency. Transgulf will also operate under the provisions of other national and state standards and specifications such as those dealing with electrical standards, flammable and combustible liquids, Coast Guard regulations on oil spills, Army Corps of Engineers regulations on crossings of navigable water and other Corps of Engineers permit regulations. Further, during the construction phase, Transgulf will obtain hundreds of permits from state and local agencies throughout Florida. Transgulf also has agreed to comply with a number of environmental protective conditions stipulated by the FERC.

In view of all of the reviews, stipulations, conditions and approvals, and the continuing close supervision by a number of federal and state government agencies, it should be noted that not one of the additional "safeguards" proposed by the consultant for the Florida Alliance has been adopted by any agency having the responsibility for the safety of interstate petroleum pipelines. Further, my strongly held opinion is that none of those so-called safeguards has any technical merit for the Transgulf Pipeline.

Made of high tensile strength steel, the pipeline will have complete corrosion protection. Wrapped in a protective coating, the 24-inch diameter line to be converted has been continuously cathodically protected since its installation in the late 1950's. It is important to note that the steel pipe, made to API 5-LX-52 specification, meets the current standards required for such pipelines. The Transgulf Pipeline must meet all present applicable standards and regulations before being put into petroleum products service just as a newly constructed pipeline would.

Transgulf will be entirely controlled and operated from its computerized control center by the best and latest Supervisory Control and Data Acquisition (SCADA) System. In addition to primary and backup computers, the pipeline will have redundant leak detection systems. Meticulous inventory monitoring using highly accurate measurement systems will be complemented by

dynamic computer modeling that will provide instantaneous and continuous line balancing. Among other leak prevention and detection measures will be a minimum of weekly visual inspections of the entire Transgulf system.

There are more than 230,000 miles of liquid petroleum pipelines operating in the U.S., and they transport more than 28 million barrels of petroleum throughout the country every day. National Transportation Safety Board statistics clearly show that pipelines are by far the safest mode for transporting petroleum.

When put into operation in 1987, the Transgulf Pipeline will be the most modern petroleum products pipeline in the world. This will be true not just because Transgulf at that time will be the newest, but because it will incorporate the best and latest state-of-the-art technology and equipment.

The CHAIRMAN. Thank you so much, Mr. Dorris.

Now I will turn to Senator Hawkins for questions.

Senator HAWKINS. I just wanted to say for the record up front, Mr. Dorris, for all of our friends here in the audience and for everyone interested in this issue, that we are not opposed to a State pipeline. I think that needs to be stated for the record.

The maritime interests are opposed to a pipeline. That is quite different, and I want to make that very clear here today, that we do not have the same interests as maritime interests. They are opposed to pipelines. We are talking about a safe pipeline.

And I would like to state for the record also that this Senator is just not satisfied with FERC or other bureaucratic regulations up there that are not from Florida. They do not have Florida responsibilities and they are not concerned about Florida drinking water. They have no idea. And if you read FERC's total study, which is quite an involved study, one or two little statements are all they made about the quality of water. Oh, if it gets contaminated, it will smell so bad, nobody will touch it. Do not worry about it.

Now that is not what I call responsible regulation, that is not even a responsible guidepost to give to the industry.

As a responsible elected Senator from this State, who has been a regulator, I might tell you I am not satisfied with minimum standards in a State that depends completely on the ground water and aquifers for our water supply. We have listened for years about the quality of life in Florida. What is happening to quality life? And basically we can live without a lot of luxuries in this State. We know that. You do not have a lot of overcoats, you do not have to have a lot of heat, et cetera. But we do have to have the water and it has to be good quality water. And we have talked for years about salt intrusion from each side.

The more we pump out of the aquifer here in this part of the State, with salt on both sides so close, it becomes a big problem, salt intrusion becomes a big problem. And I want those who drink water in this State to understand that that is what we are talking about in this hearing, having water that is safe for drinking come out of every faucet in every home. And I believe you want that in your home. I know I do in Winter Park.

What is the maximum amount of oil products which could spill from the pipeline should a significant leak occur, Mr. Dorris?

Mr. DORRIS. I cannot tell you that because the design has not been complete. The construction design, the spacing of the valves, and other features to prevent spillage are ongoing design problems. The conversion design study will be delivered, when completed, to the Department of Transportation and to the Department of Environmental Regulations here in Florida for their input.

I think we need to talk about possible spillage from pipelines, however, it really is not as an important issue as preventing that spillage from happening.

Senator HAWKINS. I would just like to say that we have been working on this pipeline for 10 years. Is that correct? It seems to me we were talking about this over 10 years now?

Mr. DORRIS. That is correct.

Senator HAWKINS. Conversion is going to take place next year?

Mr. DORRIS. Yes.

Senator HAWKINS. And you do not have the design yet?

Mr. DORRIS. You know, with engineering, you never really get finished because we always learn as we go along.

Senator HAWKINS. Well, I hope so.

But I do not understand anyone not knowing today what the design is going to be and what the maximum amount of oil product is which could spill from pipelines.

It depends on where the shutoff valves are?

Mr. DORRIS. It does to some extent.

Senator HAWKINS. It depends on whether they are remotely controlled or not?

Mr. DORRIS. It does not.

Senator HAWKINS. It does not?

Mr. DORRIS. It does not.

Senator HAWKINS. So what is the largest undertake of a leak?

Mr. DORRIS. Again that is being developed in the design of the system. I might say that——

The CHAIRMAN. Give us the range, Mr. Dorris.

Mr. DORRIS. Let me see what the literature says, what scientists and engineers who have designed other systems——

The CHAIRMAN. Tell us about your experience. You are one of the top people in the world in this field. I have great respect for your personally.

Mr. DORRIS. Literature tells us that leaks as small as 1 to 2 barrels can be detected immediately. I believe that our system will have that kind of accuracy.

Senator HAWKINS. So it is usually 1 barrel. One barrel would be 42 gallons per hour?

Mr. DORRIS. That amount would leak from the pipeline.

Senator HAWKINS. OK.

So 1 gallon pollutes 100,000, is that right?

Mr. DORRIS. I have heard that, Senator. However, I happen to know that EPA standards permit drinking water to have substantially more quantities of oil and grease in them than that

Senator HAWKINS. We do not want them in Florida. OK?

Mr. DORRIS. I do not either.

Senator HAWKINS. If it pollutes 100,000 gallons of water per gallon of oil, then 4,200,000 gallons get polluted each hour from 1 barrel or 1 gallon also, right?

Mr. DORRIS. I do not think that is right because——

Senator HAWKINS. If it pollutes 100,000 gallons of water per gallon of oil, and 4,200,000 get polluted each hour from that 1 barrel spill——

Mr. DORRIS. If we believe that every barrel or every gallon of product spills——

Senator HAWKINS. I am talking about one right now.

Mr. DORRIS. If it goes into the drinking water, and, of course, that does not happen.

Senator HAWKINS. That means 100 million gallons of water a day. And I believe some place you stated it was $4 a gallon cleanup charges, is that right?

Mr. DORRIS. I have no idea where that number came from.

Senator HAWKINS. If it is undetected, which we have heard of undetected leaks on the old pipeline, if it is undetected, it keeps on spilling for years, a slow seepage.

Mr. DORRIS. Well, that simply will not happen. And let me tell you why it will not.

Every time an operating pipeline is shut down, because pipelines do not operate all the time, the pipeline is shut down under pressure, each section is shut down under pressure—this is what Mr. Mastandrea described as a static test—so that anytime the pipeline is not being used to move product, it is shut down under pressure, and any leaks, any small amount of leak would cause the pressure to fall, and this would be a signal to the operators that they must find the cause before resuming operation.

The CHAIRMAN. How often are those inspections taken?

Mr. DORRIS. Literally every time the pipeline is shut down.

The CHAIRMAN. So that could be a matter of years or a matter of months or a matter of days?

Mr. DORRIS. Well, I think more likely a matter of days.

The CHAIRMAN. How often is it shut down?

Mr. DORRIS. It just depends on what the schedule is.

The CHAIRMAN. It could go years without being shut down?

Mr. DORRIS. Not likely.

In the beginning, the pipeline, of course, will not operate at its maximum capacity so it will have a lot of periods of shutdown.

More important than that methodology, however, is the computer based system which will detect leaks any time that they happen. Similarly, petroleum, as all of you know, is lighter than water. Leaks come to the surface of the ground and could be observed, even a very small leak. It is not uncommon for an air patrol pilot to discover leaks before they even surface by noting a different shade of color in the vegetation over the pipeline.

Senator HAWKINS. I mean somebody has to notice it or is it an electronic signal that is sent back if it is leaking, is it a visual inspection?

Mr. DORRIS. Yes. You know, just as tank trucks spill gasoline around our highways, people spill gasoline on——

Senator HAWKINS. How much of this pipeline is underground?

Mr. DORRIS. I am sorry?

Senator HAWKINS. How much is underground?

Mr. DORRIS. All the pipeline is underground.

Senator HAWKINS. So by the time it is on the surface and someone sees it visually, then it has been in the ground for sometime since it is buried what, 30 inches beneath the ground?

Mr. DORRIS. About 36 inches, yes.

If the leak is of any magnitude, as I indicated earlier, the leak detection system will find it. And remember I said the system has a redundant leak detection system. It has two independent leak detection systems that are constantly examining all the data which is being transmitted by satellite back to the control center at Kissimmee.

I think one measure of this, if you think about it, is how many times have you ever heard of a real serious problem of pipelines. Pipelines have problems like everything made by man. I suggest

you compare that with the number of times you have heard of ships in trouble spilling petroleum.

Senator HAWKINS. But that does not bother the aquifer right now so I am not concerned with that today.

I am concerned with safe drinking water in the State of Florida. That is what we are talking about.

So those systems I want to talk about in fact what is the largest leak that could happen on a pipeline without being detected. And you had 16 leaks in the last 10 years that has been documented. What you are saying is that might not happen in the future. But I just want to talk about if it is possible that there would be a leak, a leak by the time it is detected, could we say that we were agreeing earlier that 1 barrel would be 42 gallons per hour. And 1 gallon, 200,000 gallons, or a million gallons of water.

If it pollutes 100,000 gallons of water per gallon of oil, then 4,200,000 gallons get polluted each hour from a 1-barrel oil spill, that means 100 million gallons of water a day. And that is what I would like for you to agree with me on.

Mr. DORRIS. I cannot agree because I used the 1-barrel figure as the smallest leak that could be immediately detected.

The CHAIRMAN. That was a minimum leak?

Senator HAWKINS. A minimum leak.

The CHAIRMAN. What about a maximum leak? What is the largest maximum leak you ever have seen from one of these pipelines?

Mr. DORRIS. I am sorry?

The CHAIRMAN. What is the largest maximum leak that you have ever seen from one of these pipelines?

Mr. DORRIS. I have seen leaks of 10,000 to 20,000 barrels on pipelines. This was 30 years ago when there were none of the present types of systems.

The CHAIRMAN. With the present type systems?

Mr. DORRIS. That is kind of hard for me—can I suggest that you think about a little experiment because I think it explains more about pipelines than I can talk about in 20 minutes.

If you imagine you had a plastic garden hose, just lying at random on your lawn and it has no pressure on it—it is full of water but it has no pressure. And you go out and take an icepick and poke a hole in that garden hose.

The question is how long then would it take the water to run out of that hose through that small hole. The answer is forever. Since there is no pressure in the hose, and liquid flows only if there is a differential pressure, very little will flow out of the hose.

You get really reckless and cut that hose in two with a hatchet, and more water will run out, but not all the water will ever run out.

Exactly the same thing is true with pipelines because there is a gradual and very small changes in terrain that all pipelines go over. South Florida is one of the flattest areas in the United States traversed by pipelines. Even here there is some small change in elevation. So if the pipeline were cut in two by a bulldozer, a surprisingly small amount of product would flow from the line.

And this is true because immediately the pipeline would receive intelligence of that and be shut down.

The CHAIRMAN. What if it ruptured?

Mr. DORRIS. If it were broken into, whatever, we would know that this happened, the pipeline would be shut down.

The CHAIRMAN. What if there is no pressure? What if there is a lot of pressure?

Mr. DORRIS. The pipeline would be under pressure, but as soon as you shut the pumps down, the pressure dissipates.

The CHAIRMAN. If you locate it and you get it that instant, you are saying it automatically shuts down?

Mr. DORRIS. The pipeline is designed to trust people only so far. The control system will permit the operator to make the shutdown decision. But if he does not make the right decision, then control system will shut down the pipeline.

The pipeline, in case of a major rupture, which is the only danger of a major spill, would be shut down in 1 to 2 minutes. The pressure when you shut off the pipeline, the pressure falls to zero almost instantly. In fact, we shut the pump stations down in such a sequence that we actually pull the pressure in the operating section down as low as it is physically possible. So there is no differential pressure for the gasoline inside the pipeline and the outside, so there is very little tendency to flow.

Now, in mountainous country, this is different. But, fortunately, in Florida we do not have any mountains. And so the elevation difference on the Transgulf pipeline are very slight. Therefore, there will be, even in the case of cutting the pipeline in two, there would be very, very minimal amount of products spilled.

Any product spill is a problem and must be responded to immediately.

Senator HAWKINS. Mr. Dorris, you said we would never hear of a pipeline break, but here is one in southeastern Pennsylvania, gasoline, two public water supply wells became polluted with gasoline. In the background was an investigation as a result of well pollution in the summer of 1971 revealed that a 14-inch pipeline carrying a gasoline product had ruptured, and approximately 134,000 gallons of product had been lost. And in the end they had to shut down those two public water supply. The well has never been put back into service.

It seems to me that we do have—this is an Illinois Geological Survey—this is only one example of what happens when—what can happen when you do have a rupture if it is around a water supply, which that one was. And that is what I am concerned about since this does travel around a lot of our water supply.

Mr. Dorris I am familiar with that. That was one of the examples contained in Mr. Mastandrea's study.

That was an old pipeline, it had a control system that was designed in the 1950's and in no way could be compared to a pipeline such as Transgulf.

The CHAIRMAN. How old was that pipeline?

Mr. DORRIS. The pipeline was built in the early fifties.

The control system was not of the current state-of-the-art control system design.

The CHAIRMAN. The Transgulf was built in 1959, and some of it will be new because you are linking up different stations.

Mr. DORRIS. But the control system, pump stations, and terminals are all 1986 design.

The CHAIRMAN. I see.

Senator HAWKINS. But you do not have the study or the design yet?

Mr. DORRIS. The design is progressing, and you never quite get finished, particularly on these control systems because people who invent computers and this type of equipment are busy all the time. On the Trans-Alaska Pipeline, for example, by the time it was completed, the control system was obsolete because new systems had come along.

We will not decide until the very last minute that we can exactly which equipment to buy for this pipeline because we want the most modern.

Senator HAWKINS. How close are the shutoff valves going to be?

Mr. DORRIS. This is still being studied, but I can tell you that the total number of valves on this pipeline will give us an average spacing of approximately 6 miles.

The CHAIRMAN. But some of them will be more than 6 miles. Will some spacing be as many as 27 miles?

Mr. DORRIS. I cannot imagine that they will be. I do not know know where that number came from.

The CHAIRMAN. Will there be as many as 20 miles?

Mr. DORRIS. I do not believe that.

The CHAIRMAN. Fifteen?

Mr. DORRIS. I simply cannot say because I do not know where they all will be because we are still designing.

The CHAIRMAN. OK, I am not trying to put you on the spot either. I just want to clarify the issue because it has been stated that the spacing of the shutoff valves will be between 4 and 27 miles. The average is 6 miles; so I presume some of them will be much more or less than 6 miles.

Mr. DORRIS. That is correct. And part of it is because other physical facilities, such as pump stations, terminals, and river crossings determine valve locations.

The CHAIRMAN. But most rivers are not more than a mile long.

Mr. DORRIS. Most of the rivers here are very small.

The CHAIRMAN. I understand you will have about 70 valves that have to be manually operated. Is that a fair estimate?

Mr. DORRIS. I do not know the number, but I would expect it may be in that——

The CHAIRMAN. Is it true that it might take over an hour to get someone to repair a leak?

Mr. DORRIS. I think that is possible. I think you should understand the principal reason for valves in pipelines is for maintenance purposes. It is not for this purpose here. What we would like to do is place the valve in such a way that if we have to drain a section, we minimize the drainage volume. That is determined by two things, the terrain and the spacing of the valves. But principally it is determined by the terrain. This is why I think the Department of Transportation has no arbitrary spacing rules on valves. The terrain itself acts as valves. Obviously, you would never put a valve at the top of a hill. A hill is a natural valve because oil doesn't flow uphill.

So that if you have a hill between two points, the top of the hill is a valve. So by using the natural terrain we can very efficiently

space the valves, and this is done by a computer working with the assumptions given to it about what kind of terrain you have for the pipeline.

Senator HAWKINS. How many of your shutoff valves are remote turnoff?

Mr. DORRIS. All of the ones that are necessary for operation and safety will be remotely controlled.

Senator HAWKINS. But how many is that?

Mr. DORRIS. I do not know that.

Senator HAWKINS. When will you know.

Mr. DORRIS. We will know when we present the plans to the Department of Transportation. I think that will be in the next couple of months.

Senator HAWKINS. Are there going to be some that are manually controlled and others that will be automatic?

Mr. DORRIS. Yes; I mentioned the valve will be intended primarily for use in maintenance of the pipeline.

Senator HAWKINS. Why would you have all shutoff valves be remotely controlled? You are telling me that if you just cannot send a man to turn off the valve.

Mr. DORRIS. One of the reasons that you use remotely controlled valves is that they are in places that are not difficult to get to; in other words, if a man simply has to walk across the street to close a valve, there is no reason to have a motor on that valve.

If there is one where the nearest road is a mile or so away and it is apt to be flooded, it makes a lot of sense for that valve to be remotely controlled.

Senator HAWKINS. If you had an rupture in the Blackwater Forest, how long would it take to shut that off?

Mr. DORRIS. The important thing is how soon can you shut the pipeline down. You can shut the pipeline down in 1 or 2 minutes.

Senator HAWKINS. The rupture is spilling in the Blackwater Forest.

Mr. DORRIS. I am sorry?

Senator HAWKINS. What happens to the rupture if it ruptures in the Blackwater Forest?

Mr. DORRIS. As I explained, the amount of flow once the pressure is shut off is very small, and by——

Senator HAWKINS. How small? How small are we talking about? How much is leaking into the Blackwater Forest?

Mr. DORRIS. I cannot tell you.

Senator HAWKINS. But oil will still spill out, not as much, but it still spills out as long as there is flow in there, right?

Mr. DORRIS. Certainly. Any time that you poke a hole in something; on the other hand, it would be surprising to know that in some cases there will be a hole in the pipeline that will be leaking in rather than leaking out after the pipeline is shut down.

Senator HAWKINS. Why don't you place the valves every 2 miles like they do in California?

Mr. DORRIS. I do not know that they do that in California.

Senator HAWKINS. The Shell pipeline in California is every 2 miles.

Mr. DORRIS. I do know that most pipelines in California are not pipelines regulated by the Department of Transportation. They were built as intrastate or private pipelines. I do not know.

Senator HAWKINS. Do people in California care more about their environment and their water than we do?

Mr. DORRIS. I certainly do not think so because we depend a lot more on it.

Senator HAWKINS. We depend a lot more on it.

Mr. DORRIS. That is right. I would think the point that putting valves every 2 miles on this pipeline will minimize the amount of spills. Best design is placing valves where they are needed based on the consideration of the terrain.

Senator HAWKINS. Why not have remote turnoff on all the valves?

Mr. DORRIS. Because closing many of the valves is unimportant because the valve's purpose is for maintenance of the pipeline.

Senator HAWKINS. Where is it unimportant? Where do you say it is unimportant?

Mr. DORRIS. If it were in an area of one of our properties, our tank farm.

Senator HAWKINS. How much of the pipeline is on your property?

Mr. DORRIS. A very small amount.

Senator HAWKINS. So that the only place you are going to have manual valves is on your own property?

Mr. DORRIS. There are going to be many valves on the pipeline that are operated manually. This is true you will find, I believe, on all the major existing systems in the United States.

Senator HAWKINS. Will all your operable valves be remote control?

Mr. DORRIS. The location of our pumping station and terminals and so forth in south Florida is such that I believe that most of those valves will be remote control. I think one of the advantages we have working in south Florida is that it is very flat and therefore no hills to run off of in case there is a line break.

Senator HAWKINS. Let us talk about the inspections which I had asked for. I know you say that this pipeline is not going to leak, but why do you not provide for annual inspections of the pipeline?

Mr. DORRIS. There are a number of reasons. The most important one is it will not improve the safety of the pipeline. Let me explain. The pipeline, as I indicated, is statically pressure-tested every time it is shut down. The leak detection systems and the visual inspection of the pipeline will tell us if there are leaks out there. Let me tell you the problems of doing hydrostatic testing. This pipeline contains 2.5 million barrels of petroleum. To hydrostatically test the pipeline would require replacing that with water.

I do not know how to treat that huge amount of water in any reasonable amount time. A disadvantage of hydro testing with water is the problem of disposal of the water plus the disruption of the State of Florida having its petroleum supply shut off for the period of time. We have estimated that it would take approximately 1 month to shut the pipeline down, fill it with water, hydro test it and remove the water.

So this would mean under that scenario the pipeline could only operate 11 months a year.

Senator HAWKINS. Don't they do it in California?

Mr. DORRIS. They do not have any pipelines of this nature. There is no Department of Transportation regulation.

Senator HAWKINS. Are there California regulations?

Mr. DORRIS. There are California regulations. They do not have authority over interstate pipelines. This is reserved to the Department of Transportation.

Senator HAWKINS. I understand, but that's a very populated area there in Brevard County and Palm Beach County and several of the counties it is going to come through. It seems to me where it is densely populated, we would be very interested in it.

Mr. DORRIS. The static testing which I described and the leak detection system and surface inspection will provide a great margin of safety. There is no advantage to filling the pipeline with water and disrupting the supply of product to Florida for 1 month each year.

This would be the same as asking every one of the ships that comes in to Florida to be put into drydock once a year.

Senator HAWKINS. I am concerned why they do it in Los Angeles, then. I have read their studies. Los Angeles requires that they do this annually.

Mr. DORRIS. I am told that they require that. I am also told that the interstate pipelines are not required to comply with that local regulation.

Senator HAWKINS. Intrastate?

Mr. DORRIS. Intrastate pipelines, I believe, now, since last October are also under the jurisdiction of the Department of Transportation. Perhaps Mr. Thompson can answer that better than I.

Senator HAWKINS. I am told that every intrastate pipeline in California is tested hydrostatically. Is it cost? Is that why you do not want to do this?

Mr. DORRIS. It is the disruption of the supply of petroleum and the environmental problems of disposing of the water that pipeline would contain.

Senator HAWKINS. Are you saying that in controlled testing there are more environmental hazards than having an oil spill?

Mr. DORRIS. Every time we did this we would be contaminating, deliberately contaminating, 2.5 million barrels of water with petroleum. That to me just does not make sense when there are other ways to do it.

Senator HAWKINS. I am just horrified by the amount of water that would be contaminated in this annual testing in contrast to how much it would take to clean up the water.

Mr. DORRIS. In the initial stage, there is no contamination of water because, of course, the pipeline has not had petroleum in it. And there we can do it, since it is not yet in operation, we can do it short sections at a time.

The CHAIRMAN. Are you saying that originally you are going to do only one hydrostatic test?

Mr. DORRIS. That is correct.

The CHAIRMAN. Even though there are some sections of the country that are tested on an annual basis like in Los Angeles where it is required under law.

Mr. DORRIS. It is required for intrastate pipelines.

The CHAIRMAN. It is required for intrastate pipelines under law in Los Angeles because it is such a highly populated area. What you are saying is that it is not economically feasible to hydrostatically test the Florida pipeline once a year after the pipeline is in full operation. So you have to rely on your system to shutdown if there is a spill anywhere along that line including Biscayne Aquifer or anyplace else where there is underground water is located.

Mr. DORRIS. That is correct. With the addition requirement that the pipeline will be statically tested whenever it is shut down.

The CHAIRMAN. But you still have to shut it down and there may be some additional spilling and some leakage. That is what I think Senator Hawkins and others are concerned about. Presently you are in compliance with FERC and DOT's limited requirements and whatever the State government has required. That is all you have to do, but beyond that are there any other safety features you can do to make sure that these beautiful areas and these underground waters, these aquifers and the drinking waters are protected, and taken care of?

Mr. DORRIS. In fact, we are doing what is required because of our belief that it is good business to do things well, and therefore a leak detection system is required.

The CHAIRMAN. As I understand it, Mr. Mastandrea and others believe that annual hydrostatic testing might be good. You indicated a few minutes ago that is a waste of money and time because you have other ways of doing it.

Mr. DORRIS. Let me talk about that. I think there is a great misunderstand about what inspection is. Let us talk about the Alaskan pipeline, for example.

The CHAIRMAN. As I understand it, they do an inspection four times a year.

Mr. DORRIS. I am advised now that it is twice.

The CHAIRMAN. It is a more modern pipeline than the one you are building.

Mr. DORRIS. I am sorry?

The CHAIRMAN. It is a more modern pipeline than the Transgulf pipeline?

Mr. DORRIS. No. This pipeline would be more modern than the Alaskan pipeline.

The CHAIRMAN. You mean the pipe itself will be?

Mr. DORRIS. Pipe is pipe.

The CHAIRMAN. I think pipe that is made and put in the ground in 1986 is better than pipe that is put in the ground in 1959.

Mr. DORRIS. I happen to disagree because the pipe meets the specifications.

The CHAIRMAN. You think it will?

Mr. DORRIS. Yes, I do.

The CHAIRMAN. Than the Alaskan pipeline?

Mr. DORRIS. The Alaskan pipeline is a different kind of pipe.

The CHAIRMAN. I understand that.

Mr. DORRIS. If we were to build this kind of pipeline today we quite probably would use the same type pipe. It would meet the same specifications. The pipe is just as good as new. Pipe does not deteriorate if it is underground and is properly protected. That pipe 100 years from now will be just as good as the day it is put in the ground. Pipe does not deteriorate. There is no wear and tear. Pipe is pipe. If it were exposed to the ground——

The CHAIRMAN. Even wet ground found in Florida?

Mr. DORRIS. The pipe is insulated from the ground with coating. An electrical current is imposed on the pipe so that all the flow of electricity is from the ground into the pipeline. This stops corrosion.

The CHAIRMAN. I think the reason we're asking these question, Mr. Dorris, is because you said virtually none of the suggestions that Mr. Mastandrea brought forth has ever been used in pipelines in this country. You admit that they are used but for different reasons in other sections of the country.

For instance, shutoff valve spacing: I happen to know that the Shell Oil pipeline is 82 miles long in California. It spaces its valves every 2 miles in populated areas, 3 to 4 miles outside of populated areas. Yours is an average of 6 miles, which means it has to be a lot more than 3 to 4 miles in certain areas. That may be fine, but I can see why Senator Hawkins is concerned.

There has been some testimony statements by some who have indicated that your spacing may be 4 to 27 miles and that you have 70 manual valves. If there is a rupture or massive loss, it could be a serious thing even though you find it very quickly because 1 or 2 minutes can amount to, like I say, a 10,000 or 20,000 barrel spill if it is in the wrong place.

You know, these are just, I think, issues that are raised that are important issues. I understand how you feel.

Senator HAWKINS. Excuse me, Senator, may I interrupt? Your testimony is, as I understand it, that the wrapped pipe does not corrode internally.

Mr. DORRIS. It has nothing to do with it. The corrosion inside is monitored in a different way, and petroleum products are not corrosive substances. Now, this is monitored by insertion at the pumping station of a coupon, which is a piece of metal just like the pipeline, from which the pipeline is made.

This is removed annually and weighed to determine if there has been any internal corrosion. Corrosion has never been a problem on product pipelines. They in essence are made to go in your cars and airplanes and what not.

The CHAIRMAN. Is every foot of the Transgulf pipeline wrapped?

Mr. DORRIS. All of it that is there is wrapped, yes.

The CHAIRMAN. All of it is wrapped.

Senator HAWKINS. The inspection that you talk about, is that not for external? Does that not measure external corrosion?

Mr. DORRIS. It protects the pipeline from external corrosion.

Senator HAWKINS. What measures internal corrosion?

Mr. DORRIS. It you were transporting—take some of the sour crude oils. These are crude oils which are very high in hydrogen sulfide, some of those—some of that material will corrode the inside of pipelines, and it is necessary to inject certain inhibitors

into those pipelines. This is just not the problem with a petroleum product pipeline.

Did you want me to finish about the inspections? I do not think I finished.

Let us talk about the Alaskan pipeline. The inspection pig that was designed for the Alaskan pipeline is quite different than any that had ever been used before, and its purpose was merely to determine if the pipeline had been subject to earthquake or settling from permafrost. What that inspection pig does is inertially measure where the pipe is compared to where it was the last time the pig went by there.

This is important in Alaska because of the earthquakes and the very remote country the line goes through and the fact the pipeline is buried in snow for part of the year. That is the only thing that pig that goes through the Alaskan pipeline does, and it was designed especially for the Alaskan pipeline.

The suppliers of electronic pigs will tell you that they can do all kinds of things with pigs. Industry's experience has been that you can do very little with them. No one wants electronic pigs to work more than the pipeline industry, and I really believe that someday there will be devices which are quite accurate. You cannot find leaks with inspection pigs.

Some inspection pigs are said to find external corrosion or internal corrosion. My experience has been that they do not work very well. We want there to be good internal inspection devices for the industry. In fact, they do not exist today.

The CHAIRMAN. As you have been referring to your ground water protection strategy, are you relying on the document known as the 1984 EPA ground water protection strategy?

Mr. DORRIS. A hydrological study is being made of the entire pipeline. And from that will result a spill emergency manual. This manual will have examined ahead of time every foot of the pipeline and the problems that would be encountered if there were a spill and also mitigating measures for every place on the pipeline will have been detailed in this manual. When it is all done it probably would not fit on this table. But this will be a working tool for people operating out in the field on the pipeline and if there is a spill it will be predetermined exactly what they should do. The manual will tell them where all of the machinery and all of tbe spill containment equipment required is located.

The CHAIRMAN. One question I have as a lover of Florida but not a Floridian, why is it that you have to go over the Floridian aquifer and the Biscayne aquifer? Is there some way you can go around them?

Mr. DORRIS. I wish there were.

The CHAIRMAN. That is the only way you can go?

Mr. DORRIS. The Florida aquifer covers essentially all of central and north Florida.

The CHAIRMAN. I see.

Mr. DORRIS. We should not really be alarmed about that because the Floridian aquifer is a closed aquifer, which means that it is quite deep and it has an impervious layer about it so that even if you deliberately tried to pour gasoline on the ground, I guarantee

you would not live long enough for the product to reach the aquifier.

The CHAIRMAN. I see. The Biscayne is a little different.

Mr. DORRIS. The Biscayne is a surface aquifer. It has been abused for centuries by man. It has been used by many cities in south Florida for the dispoal of sewage. It is presently used by hundreds of homeowners to dispose of their sewage througb septic tanks. It has been insulted by chemical plants and other people spilling chemicals on its surface through the years. There have been problems.

But surprisingly the biggest single thing has been people pumping too much water from it so that we have intrusion from the Everglades where the water is not suitable for drinking and from the ocean.

The CHAIRMAN. I just have one last question, and that is the Transgulf pipeline brochure indicates that ordinary citizens can call a telephone number which will be posted along the entire pipeline right of way in case of damage to the pipeline. Now, the natural question that arises in my mind—and I think I know the answer to it—but why would this be necessary if you have such advanced, computerized detection equipment?

Mr. DORRIS. Well, the biggest reason is we hope the people will see that before they dig into the pipeline. If a farmer, for example, is going to dig a ditch across his field, if he knows that if he calls that number someone will immediately come out there and show him exactly where the pipeline is and how deep it is so that he will not dig into the pipeline. As has been indicated, more than half of the accidents to pipelines in the United States are caused by third parties.

The CHAIRMAN. Thank you, sir. We appreciate you coming and enjoyed your testimony.

Mr. DORRIS. Thank you, sir.

The CHAIRMAN. The next panel of witnesses will include Ms. Marva Davis, a very dedicated representative from the Midway Community Council, Inc., in Tallahassee, FL; and Walter and Carol Dover are homeowners residing by the Midway terminal. These individuals are concerned citizens who will share their concern regarding the Midway terminal.

Raise your right hands. Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God.

[Chorus of ayes.]

The CHAIRMAN. We will begin with you, Ms. Davis, and then we will turn to Walter and Carol Dover.

STATEMENT OF MARVA A. DAVIS, ATTORNEY, MIDWAY COMMUNITY COUNCIL, INC., MIDWAY, FL; AND WALTER AND CAROL DOVER, RESIDENTS, MIDWAY, FL

Ms. DAVIS. Senator Hatch, Senator Hawkins, I am the attorney for the Midway Community Council, Inc., and I would like to take this opportunity to thank you for inviting me to speak to you on behalf of the Midway Community Council, Inc. Our organization is an organization of citizens who reside, own property in, or who have community ties in Midway, FL, a small, rural community

west of Tallahassee. The organization was formed approximately 8 or 9 years ago, among other things, to improve and promote the health, safety, and general welfare of the community.

However, the last 7 years have mandated that the organization utilize a substantial amount of its energy and resources in a legal battle that has pitted a small, predominantly black, economically poor community against a big corporate giant, the Transgulf Pipeline Co. During those last 7 years, the Midway community has been fighting the the Transgulf Pipeline Co. to prevent it from building an almost 15 million gallon storage facility and a terminal from which 150 truck trips will be made daily in the midst of a residential section of the community.

This powerful petroleum company has chosen to locate its facility on property belonging to the heirs of a black family and has indicated its intent to condemn the property in order to take it for use as a storage facility and terminal.

Within 100 feet of the terminal on the south side is the residence of Mr. Orval Pettis. The terminal site will surround a historic cemetery and will only be physically separated from the cemetery by a buffer of trees. Approximately 100 feet north of the terminal is the residence of Mr. and Mrs. Audrey Young. Within 500 feet northeast of the terminal site are two churches, St. Paul's Church and St. John's Church, which has been serving the community for over 100 years. Within a few hundred feet east of the terminal site is another local cemetery.

Transgulf has chosen to build its facility at the mouth of a dead end road, which is the only means of ingress and egress for the residences of approximately 17 homes located on St. John's Church Road. Due to the location of this proposed facility in the midst of a residential section of the community, in the event of fire or explosion at that particular terminal, the persons living on St. John's Church Road could only be evacuated by helicopter.

We believe that Transgulf's site location is grossly negligent and in reckless disregard for the safety of the people within the community. In a meeting before the cabinet aides, Mr. Wiley Cauthen, who is the vice president of Transgulf, was asked about the means of escape for residents on St. John's Church Road. In reply, Mr. Cauthen appeared to insinuate that he saw nothing wrong with residents having to flee their homes through the woods to escape a fire in the event one occurred at the terminal.

The Midway Community Council, Inc., feels that human concerns have been lost throughout the entire process of locating and permitting the terminal. We are afraid that human lives will be needlessly lost and the only residences that most persons will ever have will be needlessly destroyed by having this hazardous facility located in a residential area.

The citizens have fought this case for 7 years throughout the courts and administrative system, yet have been recently told that the question of location of the storage facility and terminal at alternative sites is irrelevant.

There is no fire station in Midway. A volunteer fire department would be totally ineffective. Special skill is needed to fight a petroleum fire. Special equipment is needed. Over the last 7 years we have had occasion to read of numerous accounts where petroleum

fires have occurred requiring hundreds of firefighters, dozens of fire departments, and foam for fighting the the fire from all around the country.

We are very cognizant of the fact that when and if there is a fire at the storage facility and terminal, the residents will have to be evacuated. Yet, due to location of the terminal, a meaningful evaluation where lives are spared will virtually be impossible.

The Transgulf Pipeline Co. has admitted that the storage facility and terminal proposed for Midway, FL, is not essential to the pipeline conversion project. The storage facility and terminal is proposed for the area simply so that Transgulf Pipeline Co. will have an economic advantage in the region.

The Transgulf Pipeline Co. has committed to build a self-contained and self-sufficient facility. Yet none of us can be so naive or so blind as to think that a hazardous facility storing over 14.7 million gallons of gasoline is not a grave potential threat to human lives and safety. Because of the potential for fire and explosion, we cannot rely upon commitments of the Transgulf Pipeline Co. to protect the health, safety, and welfare of the citizens. It is important that regulations be made in advance to govern Transgulf's storage facility and terminal.

A year or so ago I had the opportunity to attend a hearing of the Florida department of environmental regulations at which they were discussing how much fuel could be leaked prior to a facility having to report that to the department of environmental regulations. Under the regulation the facility would have been able to permit a 1 percent loss prior to having to report it. In the instance of the Transgulf Pipeline Co., as that regulation would have been applied, a 1 percent total volume loss could have been a major catastrophy.

After meeting with the Florida Department of Environmental Regulations, aboveground storage tanks were not covered by the newly developed regulations. However, to date, still that department has not established any regulations for aboveground storage tanks.

In addition, since Transgulf has chosen to locate in the revenue poor, Gadsden County, FL, it is a certainty that its proposed terminal facility will also go unregulated.

If we have learned anything from our recent shuttle disaster, it is that economic decisions may outweight concerns for safety. It is for this reason that we cannot give the Transgulf Pipeline Co. carte blanche to construct its storage facility, terminals, and pipeline without adequate regulation.

With all the environmental advantages that a pipeline will bring, those advantages will not outweigh the disaster, the destruction that will be caused if we permit this facility, this pipeline to go unregulated. It is up to our Government to see that there are adequate rules, regulations, and laws that govern this facility and the pipeline such that in the end we avoid unnecessary catastrophe, needless lose of life, and needless pollution of our groundwater.

In conclusion, I wish to urge you not to turn a deaf ear to the cries of those who say that an ounce of prevention is worth a pound of cure. It cannot be overemphasized how important it is that we protect our ground water from being polluted, rather than

having to clean up our water or having to tax our citizens because there is no insurance that will cover petroleum cleanups.

If it means that we must set aside special areas for hazardous facilities in order to minimize the adverse impacts upon our people, then let it be so. If it means that we must regulate the construction of a pipeline in order to have good drinking water in tbe future, then let it be.

In the end, mankind will be better served by this protectionist viewpoint than it would by an environmental theory that we should be content with the lesser of two evils and disregard all other legitimate concerns. Thank you.

The CHAIRMAN. Thank you, Ms. Davis. Mr. Dover, please limit your testimony to 5 minutes.

Mr. DOVER. Thank you, Mr. Chairman. My name is Walt Dover. This is my wife, Carol Dover. We would like to thank you for the opportunity to meet wtih you today and discuss with you our interest in this dilemma. With your permission, since we are running out of time, my wife would like to show you some photographs which will give you a better idea of the problems that we face as residents and concerned parents.

We live right by the pipeline and the proposed tank farm will be practically in our front yard also. Please understand that we do not wish to stand in the way of progress or any improvements which will be for the betterment of the community and the State.

However, we also want you to understand we are not willing to jeopardize the safety of our lives, our children, and our property for the purpose of some pipeline company to increase the value of their stock. If I may, I would like to give you a little history about who we are and why we are here.

In 1946, my father purchased an 800-acre farm in Gadsden County which now borders the pipeline. For many years he did as other farms in this particular county, shade tobacco for his livelihood. In 1966, when labor costs became astronomical, the tobacco market fell off. Deciding not to grow another crop, my dad, after much research, took on a new endeavor, aquaculture. At present, my father's operation hatches 1.5 to 2 million channel catfish fingerlings each year.

Needless to say, clean water is essential to my father's livelihood, and my brother and I anticipate carrying on the dream after he is gone. The vapor and leakage problem which is inevitable will doom all of our chances for a continued successful aquaculture.

And, by the way, if you think my family is not concerned about preserving life and the environment, my father has served as a supervisor to the Soil and Water Management District of Gadsden County for around 6 years. In 1976, he won the outstanding conservationist award for Gadsden County.

You may think that we are stretching a point by saying that our lives will be endangered by this pipeline conversion. Well, maybe we can explain it to you. Thanks to Governor Graban and his cabinet, my wife and I will have a tank farm no less than a quarter of a mile from my front door and less than 200 yards from my front yard property line. With this tank farm comes 80 semitractor trailer trucks which will operate 24 hours a day from this location. The farm will operate under a key lock system and will employ one

person to supervise its operations. Therefore, the tank farm will have 80 different truck drivers who will be anxiously trying to meet deadlines and certainly not concerned about the spillage that occurs when filling these trucks.

Our home is located on property that my dad deeded to us and is downhill from the tank farm. With the natural flow of the land and the help of rainfall, the spillage from the tank farm will find its way to our property, destroying the wildlife, the vegetation, our water and, needless to say, totally ruining our lives.

With the air, water, and land pollution, we will also have the privilege of listening to 80 trucks, day and night, for the rest of our lives.

Accompanying all the other benefits we will enjoy with this pipeline is constantly living in fear, knowing that one slip or leak could wipe us out completely. But I will let the experts discuss the dangers of the explosion.

Transgulf is placing some 19 silos for storing gasoline at the tank farm. From these silos a tremendous amount of vapor will escape into the air. Perhaps one would think when you live in the country you have plenty of air and the vapors will dissipate and cause no immediate threat. On the average of 7 months out of every year we have a fog in the area, a heavy fog. This vapor will mix with the fog and settle on our ponds, streams, and everything else that we come in contact with.

As far as the pipeline, the existing pipeline is located to the north of my dad's farm. In this particular area, several spring water heads create the streams that feed our ponds. Presently, these streams run under the pipeline on their way to our major irrigation and feeding ponds. From our ponds the water travels to the Oklache River and then to Lake Talquin. Image what would happen if a leak occurred at this site.

Recently Carol and I viewed some tapes of news reports pertaining to a pipeline leak near Lake Alfred in Polk County. I would like to say this is not Transgulf pipeline. It was another pipeline. After watching these news clips we realized the real danger of the pipeline. Who discovered the leak? Was it the meticulous inventory monitoring mentioned by Mr. Dorris a few minutes ago? No, it was not. When asked how they knew there was a leak, the residents, not the pipeline people, said that they smelled the gas and the fumes and suspected something; 30,000 gallons of gasoline leaked in Polk County.

The CHAIRMAN. That may be the reason for the telephone number—to inform the company of a pipeline leak. Your testimony is very moving because I think to say or talk in terms of 1 barrel leaking, that is bad enough; but when you are talking in terms of as many as 200,000 to 800,000 barrels that can leak before it is detected and corrected, that can happen.

Now, I am for progress and basically, pipelines serve progress. But there ouqht to be adequate safety measures. The State can't just rely on the Federal Government inspectors and their safety suggestions because the Federal Government relies on the State and their inspectors. That is the problem.

We have the Congressional Research Service, for instance, who did a study. The researcher said that under the the direction of

EPA Administrator William B. Ruckleshaus the agency released its "ground water protection strategy" on August 30, 1964. This document provides guidance for only EPA ground water protection programs.

The study cites that the EPA ground water protection strategy is the state of the art document and contains enforcement provisions or procedures that might interfere with State ground water actions. As a result, the CRS says the States are expected to take the lead toward protecting ground water. But these individual efforts have been inconsistent.

Now, that is the Congressional Research Service analysis. It is a nonpartisan service. We rely on them. If your State does not do the job, it is not going to be done. The Federal Government does not have the resources, including people to do the entire job.

I agree with Senator Hawkins. If our States do not help protect the safety of the pipeline, it is not going to be done. I really question whether Florida's State regulatory agency has done the job. Today I have not seen much evidence that they have. Thank you, Mr. Dover, I think your testimony has been very good.

Could you submit the rest for the record.

Mr. DOVER. Certainly, yes, sir.

[The prepared statement of Mr. and Mrs. Dover follows:]

PREPARED STATEMENT OF WALTER AND CAROL DOVER

MR. WALTER DOVER } Resident
MRS. CAROL DOVER }

WALTER'S FATHER IS OWNER OF HENRY B. DOVER'S CATFISH HATCHERY IN GADSDEN COUNTY. OUR HOME IS LOCATED ACROSS THE ROAD FROM THE PROPOSED TANK FARM.

HENRY DOVER HAS SERVED AS SUPERVISOR OF SOIL AND WATER MANAGEMENT DISTRICT OF GADSDEN COUNTY FOR 16 YEARS AND IN 1976 [illegible] THE WORD "OUTSTANDING CONSERVATIONIST OF GADSDEN COUNTY."

THE TANK FARMS WILL RUN 80 PLUS TRUCKS A DAY 365 DAYS A YEAR GOING PAST OUR HOUSE TO THE TANK FARM.

THE PIPELINE BORDERS OUR PROPERTY TO THE NORTH AND SHOULD A LEAK OCCUR, OUR TOTAL PROPERTY AS WELL AS MY DAD'S PROPERTY (800 ACRES) AND PONDS WILL BE DESTROYED. THERE IS A DAM TO THE WATER FLOWING FROM STREAMS GOING AROUND THE PIPELINE TO OUR "MOTHER POND."

~~Alderman Chamberlain~~, Members of the
and this is my wife Carol; Thank you for allowing us the opportunity to address you today and we appreciate your interest in our dilema; With your permission ~~Madam Chairman~~, my wife ~~would like to show you~~ some pictures which will show a little more clearly our concerns. Please understand that we do not wish to stand in the way of progress. We are totally for any improvements which will be for the betterment of our community and state. However, we also want you to understand that we are not willing to jeopardize the safety of our lives, our children and our property for the purpose of some ~~foreign~~ pipeline company to increase the value of their stock.

If I may, I would like to give you a little history about who we are and why we are here.

In 1946, my dad purchased an (Which now borders the pipeline) 500 acre farm in Gordon County. For

Give a little history as to the pipeline and our concerns. We then ask for support by the public and the purpose of our visit. Thank you for your time and consideration. Respectfully yours

I would like Carol to read

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many years, he did as other farmers in this particular county, and grew shade tobacco for his livlihood. In 1966, labor costs became astronomical and the tobacco market fell off. Deciding not to grow another crop, my dad, after much research, took on a new endeavor ..... aquaculture. At present, my father's operation hatches 1½ to 2 million channel catfish fingerlings each year. Needless to say, clean water is essential to my father's livlihood and my brother and I anticipate carrying on his dream after he's gone. The odor and leakage problems which is inevitable, will doom

(3)

all of our chances of continued successful aquaculture .... And, by the way, if you think my family is not concerned about preserving ~~[illegible]~~ it and the environment, my father has served as a supervisor ± the Soil and Water Management District of Gadsden County for sixteen years and in 1976, he won the "Outstanding Conservationist of Gadsden County."

You may think that we are stretching a point by saying that our lives will be endangered by this pipeline conversion well, maybe we can explain. Thanks to Governor Graham and his Cabinet, Carol and I

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would have a tank farm less than ¼ th
of a mile from our front door and less
than a 200 yards from our front yard
property line. With this tank farm comes
80 semi-tractor trailer trucks which
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location. The farm will operate under a
lock-lock system and will employ one
person to supervise its operation. Therefore, a
40 tank farm will have 80 different
tanker drivers, who will be anxiously
trying to meet deadlines and certainly not
concerned about the nuisance that occurs
at a filling tank truck.

(5)

Our home is located on [redacted] property that my dad deeded us and is downhill from this tomb farm. With the natural flow of the land and the help of rainfall, the spillage ~~of~~ from the tomb farm will find its way to our property, destroying the wildlife, the vegetation, ~~and~~ [redacted] our water and needless to say, totally ruin our lives.

With the air, water and land pollution, we will also have the privilege of listening to 80 trucks, day and night for the rest of our lives.

Accompanying all the other benefits,

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we will enjoy with this pipeline, is constantly living in fear, knowing that one slip up or leak could cause us completely out. But, all of let the experts discuss the dangers of the explosions. [See Attached 6A Tank Farm]

Recently, Carol and I viewed some tapes & news reports pertaining to the pipeline leak near Lake Alfred in Polk County. This was not Trompeys - another pipeline After watching these news clips, I realized the real danger of the pipeline. When asked Who discovered the leak? Was it the meticulous inventory monitoring maintained by Mr. Davis how they knew there was a leak, the residents of Mirit Home Park said that they smelled the gasoline fumes and suspected something. Now.... 30,000 gal spilled.

(LA)

Tank farm -

Transfuels is planning some 19 silos for storing gasoline at the tank farm. From these silos, a tremendous amount of vapor will escape into the air. Perhaps one would think .. well, we have plenty of air in the county and the vapor will dissipate and cause no immediate threat. Well, we ask you to look again and realize where we live. In an average 7 seven months out each year, we have fog in our area. This vapor will mix with the fog and settle on our ponds, streams and everything else we come in contact with.

The existing pipeline is located to the north of my dad's farm. On this particular area, several spring water heads create the streams that feed our ponds. Currently, these streams run under the pipeline on their way to our major irrigation and drinking ponds. From our ponds, the water travels to the Chalachee River and then to Lake Talquin. Imagine what would happen if a leak occurred at this site.

isn't that a "~~bell~~ her of a noise". We have fire alarms in our homes that warn us of the first ~~bit~~ hint of smoke .... we have temperature gages in our cars which warn us of overheating which will eventually cause much damage, if not corrected. But, here we have a multi-million dollar operation which has no warning degrees of leakage except by the surrounding residents who detect the leak by smelling it. What if the wind is blowing away the residents ... "No warning until its too late." We think its absolutely hideous to

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allow a multi-million dollar corporation to create a pipeline with no control whatsoever. They appear to have no restrictions or no guidelines they must measure up to. Therefore, we respectfully request that you do everything in your power to disallow this deadly pipeline conversion and tank farm.

The CHAIRMAN. What I would like to do is keep the record open because Senator Hawkins and I may want to submit some further questions to you and to you as well, Ms. Davis.

Senator HAWKINS. May I ask just one question in conclusion, Mr. Chairman.

The CHAIRMAN. Yes.

Senator HAWKINS. Has Transgulf agreed to make any concessions to address your concerns, Mr. and Mrs. Dover?

Mrs. DOVER. No.

Mr. DOVER. No, ma'am.

Senator HAWKINS. Ms. Davis, the same question to you. Has Transgulf agreed to make any concessions to address your concerns that you spoke of here today?

Ms. DAVIS. No, none. No efforts have been made to relocate the potentially hazardous facility outside of the residential area.

Senator HAWKINS. I am sure you have met with them several times. Thank you. I just wanted to know that for the record. There will be some questions, as the chairman stated.

The CHAIRMAN. We will keep the record open for all witnesses.

Senator HAWKINS. We appreciate your coming down here this far today.

The CHAIRMAN. Thank you so much for coming.

We will now turn to Mr. James Blume of the U.S. General Accounting Office in Washington, DC, and Mr. James C. Thomas.

Mr. Blume, from the U.S. General Accounting Office, an independent arm of the Government which is set up to provide independent audits of Government agencies, was the author of a report "Need to Assess the Federal Role in Regulating and Enforcing Pipeline Safety." Mr. James Thomas is the Executive Director of the Office of Pipeline Safety of the U.S. Department of Transportation. Mr. Thomas has been working in pipeline safety with the Department of Transportation for 15 years, and he was formerly with the southern region which oversaw the Transgulf pipeline.

We will turn to you first, Mr. Blume, and then we will go to Mr. Thomas. Please limit your testimony to 5 minutes.

STATEMENT OF JAMES M. BLUME, GROUP DIRECTOR, RESROUCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, U.S. GENERAL ACCOUNTING OFFICE; AND, JAMES C. THOMAS, EXECUTIVE DIRECTOR, OFFICE OF PIPELINE SAFETY, RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION

Mr. BLUME. The Department of Transportation is responsible for establishing the safety standards for both interstate and intrastate pipelines. States may assume responsibility for enforcement of safety standards for all or a portion of the intrastate pipelines located within their borders.

Some States, acting as agents of the Department, also have been inspecting interstate pipelines.

The CHAIRMAN. Did you say the Federal Government is responsible for all inspections.

Mr. BLUME. The Federal Government is responsible for all inspections, sir.

The CHAIRMAN. All right.

Mr. BLUME. A State's participation in the program is strictly voluntary, but participating States can obtain Federal reimbursements for up to 50 percent of the cost incurred operating their programs.

The Department is responsible for inspecting interstate pipelines and those pipelines that States do not assume responsibility for. In addition, it monitors the participating States to ensure that these States are adequately enforcing Federal safety standards. As of December 31, 1982, 32 States assumed jurisdiction over some but not all of the various types of intrastate gas operators that existed in those States.

We found that the Department has not provided adequate inspection coverage of the interstate and intrastate pipeline operators for which it has responsibility. In addition, the Department's inspection coverage may be reduced further because most States indicated they do not intend to assume responsibilities for intrastate gas pipelines for which the Department is now responsible or intrastate hazardous liquid pipelines in their States.

A few States also indicated they are thinking of discontinuing all or a portion of their existing inspection activities, in which case the Department would have to pick up the responsibility. If this happens, there seems to be no doubt the Department's inspection workload would increase.

The Department is also responsible for ensuring that participating State agencies are adequately enforcing the Federal safety standards. However, since the State's participation is strictly voluntary, the Department does not have a viable means for requiring States to correct deficiencies in their programs and/or assume responsibility for additional intrastate pipeline systems.

Therefore, we believe the need exists to align the Department's program responsibilities for regulating and enforcing pipeline safety, particularly with regard to intrastate piplines, with the authority and resources needed to effectively carry out those responsibilities. The Department has not had enough inspectors to meet its goals for performing an annual comprehensive inspection of each pipeline operator in its workload inventory. Our analysis of the inspection records showed that 24 percent of the pipeline operators received comprehensive inspections in 1981 and 17 percent in 1982.

Some operators have been inspected only once every 3 to 5 years. In addition, some types of intrastate gas operators had not been included in the Department's workload inventory and are inspected only when a complaint is received, an accident occurs, or a specific request is made.

Acknowledging the Department's limited inspection resources, we believe inspection coverage of the pipeline operators under Federal jurisdiction could be enhanced by, one, requiring each intrastate pipeline operator to maintain a quality assurance program that addresses Federal safety standards; and, two, improving the Department's inspection records and reports to provide management more data on inspection workloads and the extent of inspection coverage being provided.

The Department's monitoring of State programs could also be improved, which I will not address at this time. I would point out

that our study was done a few years ago and the Department is supposedly addressing our issues.

For the sake of time, Mr. Chairman, I will terminate my statement now and answer any questions you may have.

[The prepared statement of Mr. Blume follows:]

UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY
Expected at 10:00 a.m.
Monday, February 17, 1986

STATEMENT OF

JAMES M. BLUME, GROUP DIRECTOR

RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE

SUBCOMMITTEE ON CHILDREN, FAMILY, DRUGS AND ALCOHOLISM

COMMITTEE ON LABOR AND HUMAN RESOURCES

UNITED STATES SENATE

ON

THE DEPARTMENT OF TRANSPORTATION'S

PIPELINE SAFETY PROGRAM

Madam Chairwoman and Members of the Subcommittee:

We welcome the opportunity to be here today to discuss our report--Need to Assess Federal Role in Regulating and Enforcing Pipeline Safety (GAO/RCED-84-102, dated July 10, 1984). My testimony is based on our report which was done at the request of the Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce. Our review generally covered program activities for calendar years 1978-82. As agreed with your office we did not update the information in our report, except that in April 1985 the Department provided us the status of its actions in response to our recommendations which are included in attachment I. This month the Department told us that it has not finalized its response to our recommendations.

The Department of Transportation administers the federal pipeline safety program using authority contained in the Natural Gas Pipeline Safety Act of 1968, as amended, and the Hazardous Liquid Pipeline Safety Act of 1979, as amended. This legislation makes the Department responsible for establishing and enforcing safety standards for both interstate and intrastate pipelines. States may assume responsibility for enforcing the safety standards for all or a portion of the intrastate pipelines located within their borders. Some states, acting as agents of the Department, also have been inspecting interstate pipelines. The states' participation in the program in strictly voluntary but participating states can obtain federal reimbursements for up to 50 percent of the costs incurred operating their programs.

The Department is responsible for (1) enforcing the standards (inspecting) for those pipelines the states do not assume responsibility for and (2) monitoring the participating states to ensure that these states are adequately enforcing the federal safety standards. In 1983, Alaska and South Dakota were the only states that did not have a pipeline safety program. However, as of December 31, 1982, there were 32 states that had assumed jurisdiction over some but not all of the various types of intrastate gas operators that existed in those states. For example, California

had not accepted responsibility for municipal, master meter, and liquefied petroleum gas systems.

We found that the Department has not provided adequate inspection coverage of the interstate and intrastate pipeline operators for which it has responsibility. In addition, the Department's inspection coverage may be reduced further because most states indicated that they do not plan to assume responsibility for (1) the intrastate gas pipelines for which the Department is now responsible or (2) the intrastate hazardous liquids pipelines in their states when the federal safety standards are amended to cover these pipelines sometime later this year. A few states also indicated they are thinking of discontinuing all or a portion of their existing inspection activities, in which case the Department would have to pick up the responsibility. If this happens, there seems to be no doubt that the Department's inspection workload will increase.

The Department is also responsible for ensuring that participating state agencies are adequately enforcing the federal safety standards. However, since the states' participation is strictly voluntary, the Department does not have viable means for requiring the states to correct deficiencies in their programs and/or assume responsibility for additional intrastate pipeline systems. Therefore, we believe a need exists to align the Department's program responsibilities for regulating and enforcing pipeline safety, particularly with regard to intrastate pipelines, with the authority and resources needed to effectively carryout those responsibilities.

We also found areas where the Department can improve both its own inspection program and its evaluations and management of the states' programs using its existing resources.

PIPELINE SAFETY

Gas and hazardous liquids pipelines in the United States total about one and three-quarter million miles and transport more than one-half of the Nation's energy supply. While statistics indicate that pipeline transportation is relatively safe when compared to other modes of transportation, a number of the pipeline failures which occur each year do result in deaths, serious injuries, and considerable property and environmental damage. For example, the 1,711 gas pipeline failures reported to the Department in 1982 (excludes telephone reports) resulted in 31 fatalities and 266 injuries. The 200 hazardous liquids pipeline failures reported resulted in 6 injuries, an estimated commodity loss of 221,411 barrels, and property damage of $1.5 million.

The Research and Special Program Administration's Materials Transportation Bureau is responsible for administering the Department's gas and hazardous liquids pipeline safety programs. For fiscal year 1984, the Department allotted the Bureau 45 of the 48 positions authorized by the Congress. Program funding amounts to $7,464,000 for pipeline safety. This includes $3.5 million for grants-in-aid to participating state agencies.

FEDERAL INSPECTION PROGRAM CAN BE IMPROVED

The Department has not had enough inspectors to meet its goal of performing an annual comprehensive inspection of each pipeline operator in its workload inventory.

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While we did not evaluate the reasonableness of the goal, we believe that the Department has not provided adequate inspection coverage of all pipeline operators under its jurisdiction. The inspection personnel assigned to the Department's five regional offices, 16 as of December 31, 1983, are responsible for inspecting about 360 interstate gas and hazardous liquids pipeline operators, 290 intrastate gas pipeline operators, and 16 liquefied natural gas facilities. Our analysis of inspection records showed that 24 percent of the pipeline operators received comprehensive inspections in 1981 and 17 percent in 1982. Some operators had been inspected only once every 3 to 5 years. In addition, some types of intrastate gas operators (master meter and liquefied petroleum gas) have not been included in the Department's workload inventory and are inspected only when a complaint is received, an accident occurs, or a specific request is made.

Acknowledging the Department's limited pipeline inspection resources, we believe inspection coverage of the pipeline operators under federal jurisdiction could be enhanced by:

--requiring, if feasible, each interstate pipeline operator to maintain a quality assurance program that addresses the federal safety standards. While the Department's inspectors would still need to spot check the operators' quality assurance programs to determine their reliability, such programs would help reduce the amount of time needed to perform an inspection. We did not determine the cost of establishing and operating quality assurance programs, however, and a cost-benefit evaluation should be made before requiring such programs.

--improving the Department's inspection records and reports to provide management more data on inspection workload and the extent of inspection coverage being provided. Agency officials need such data to make the most effective use of available staff and funds. Existing workload data does not include (1) many of the small intrastate gas operators that the Department is responsible for inspecting, and (2) a breakout of the large interstate operators into common inspection units or segments--e.g., districts. One operator may have several pipelines, constructed at different times, carrying different commodities, and transversing a half dozen or more states but the Department considers this to be one inspection unit, just the same as another operator whose system consists of one line, one commodity, and operates in 1 or 2 states. The inspection activity data being reported also does not differentiate between the various types of inspections, such as comprehensive inspections, followups on prior inspections, and inspections of new pipeline construction.

DEPARTMENT'S MONITORING OF STATE PROGRAMS COULD BE IMPROVED

The Department is responsible for ensuring that the states' pipeline safety programs are adequate to assure operator compliance with the federal safety standards. In carrying out this responsibility, the Department (1) requires the states to maintain and report certain data on their inspection workload and activities and (2) performs an annual evaluation of each state agency. The annual evaluations are based primarily on onsite monitoring

visits which include a review of the state agency's inspection records, a discussion of the program with state program personnel, and accompanying a state inspector on an inspection of a pipeline operator. In reviewing the Department's guidelines for state participation in the program and its annual evaluations of the states' programs, we found:

--Some important program elements, which the Department needs to consider in determining the adequacy of a state's program, either have not been adequately defined or need to be updated. For example, the Department has not established minimum training requirements for state inspectors or adequately defined the criteria needed to determine whether state inspectors are qualified. Also, the workload factors used to determine the minimum number of staff days the states should spend inspecting pipeline operators need to be updated to reflect changes to the states' inspection workload.

--The annual monitoring visits should include more and better ways of evaluating a state agency's performance. For example, in determining the adequacy of a state's inspection coverage, the Department should determine how many of the pipeline operators under the state agency's jurisdiction were inspected during the year and whether or not the inspections were comprehensive.

--The Department's reviews of state inspection workload and activity data have not been sufficient to detect errors and inconsistencies in the data. This data, which includes

such information as the amount of time the state inspectors spend inspecting pipeline operators and the number of violations of the safety standards the state found during the year, is used by the Department in its evaluation of the state programs.

FEDERAL RESPONSIBILITIES NEED TO BE ALIGNED WITH THE DEPARTMENT'S AUTHORITY AND STAFFING

The Department does not have adequate program authority and resources to carry out its current program responsibilities. Since the states' participation is voluntary, the Department does not have a viable means of requiring the states to correct deficiencies in their programs and/or assume responsibility for additional intrastate pipeline systems. Furthermore, possible future increases in the Department's inspection workload may cause further deterioration in its already limited inspection coverage.

As previously mentioned, the Department has not provided adequate inspection coverage of all pipelines for which it has been responsible, including the intrastate gas pipelines, and this problem may worsen. Although the states have assumed responsibility for most intrastate gas pipelines, there still are a large number of intrastate operators (including 255 municipals and an estimated 27,400 master meters) under the Department's jurisdiction and this situation is likely to continue for some time. In addition, as of June 1983, 17 of the 39 states with intrastate hazardous liquids pipelines did not have the state legislation necessary to assume jurisdiction over these pipelines. They also had indicated that they are not interested in assuming this

responsibility when the federal safety standards are amended to include the intrastate hazardous liquids pipelines later this year. Of the remaining 22 states, 14 had the necessary state legislation and 8 were requesting it.

While a few states have expanded their gas pipeline safety inspection programs in recent years, 15 states experiencing staffing and/or funding constraints have already reduced or are planning to reduce their inspection activities. Another 4 states have said that they may consider dropping out of the program. To the extent the states drop out of the existing gas program and do not accept the new hazardous liquids program responsibility, the Department will have to take on this additional inspection workload involving intrastate operators.

The Department also lacks the leverage needed to require increases and improvements to state agency programs. It has had moderate success in getting states to make program changes as a result of their state agency evaluations. But, the Department can do little to require a state to implement recommended changes if the state is unable or does not want to do so. If a state is not satisfactorily carrying out a safety program, the Department may (1) withdraw the state's certification and assume jurisdiction over all the state's operators or (2) withhold grant-in-aid funds. In a case where grant-in-aid funds are withheld and the state's inspection activity seriously decreases, the Department in turn might have to withdraw the state's certification and assume jurisdiction over all the state's operators. This would place a further demand on the Department's already limited resources.

Considering the Department's present inspection workload, possible future increases in its workload, and its lack of program authority, we believe that the Department, with input from the states, should consider changes to the present program in terms of its responsibilities and/or its funding and staffing levels.

This concludes my testimony. I will be pleased to answer any questions that you might have.

ATTACHMENT I

STATUS OF RECOMMENDATIONS, AGENCY COMMENTS
AND ACTIONS TAKEN FROM OUR PRIOR REPORT

In April 1985, the Department provided us the following information on the status of the actions it has taken in response to our recommendations.

RECOMMENDATION

We recommend that the Secretary of Transportation direct the Administrator, RSPA, to develop and present to the congressional oversight and appropriations committees, alternatives to redefine the federal role and responsibilities for assuring the safety of intrastate pipelines, including the hazardous liquids pipelines. These alternatives should propose different combinations of responsibilities for intrastate operators not currently under a state's jurisdiction as well as defining the federal responsibility for assessing state agency programs. Each alternative proposed should include (1) the role and responsibility of both the Department and the state agencies; (2) a discussion of the safety risks associated with the alternatives; and (3) the identification of any legislative changes associated with each alternative. Each of the alternatives presented should also include (1) estimates of the staffing and funding levels RSPA and the states would need to carry out those function which would be their responsibility and (2) analysis of the impact each alternative would have on inspection activity.

Agency comments and actions taken

The Department agreed with this recommendation; it has begun a study of the federal and state pipeline safety roles and

anticipates completing it in October 1985. On the basis of our discussion with the Department official responsible for the study, it will

--discuss financial alternatives to maintain or obtain state participation in the program,

--analyze the impact of each alternative on inspection activity and provide information on general staffing and funding needs, including types of funding mechanisms as they apply to each alternative (e.g., user fees), and

--identify any needed legislative changes.

Because the study is still in its formative stages, we are not able to provide specific comemnts at this time. However, on the basis of our discussions with Department officials, we believe that the study, if carried out as planned, has the potential to identify last year's hearings.

RECOMMENDATION

Acknowledging the Department's limited pipeline inspection resources, we believe inspection coverage of the pipeline operators under federal jurisdiction could be enhanced. Thus, we recommended that the Secretary of Transportation direct the Administrator, RSPA, to take the following measures:

--Evaluate and, if the benefits of having pipeline operators establish a quality assurance program outweigh the cost, implement a mandatory quality assurance program for interstate pipeline operators.

--Complete and update its inspection workload inventory by dividing all interstate gas and liquid operators into common inspection units, and include the master meter and liquefied petroleum (LP) gas operators that are under its jurisdiction.

Agency comments and actions taken

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--Complete and update its inspection workload inventory by dividing all interstate gas and liquid operators into common inspection units, and include the master meter and liquefied petroleum (LP) gas operators that are under its jurisdiction.

--Require MTB's regions to expand and refine the inspection workload and activity data inventory they maintain and report to headquarters for each category of operator, the number of inspection units subject to inspection and the number of units that have been inspected one or more times during the year, and a breakout of the number of inspections performed by type of inspection.

Agency comments and actions taken

In responding to OMB Circular No. A-50, the Department stated that it is evaluating the concept of a mandatory quality assurance program for interstate pipeline operators. In a March 26, 1985, memorandum to us, the Department indicated its regional offices had divided operators into common inspection units as of January 1, 1985. The Department has also asked states to divide

ATTACHMENT I

operators into common units. The Department informed us that the revised monthly report from the regions to headquarters was instituted January 1985. It includes inspection data. The Department has also stated that master meter and liquefied petroleum (LP) gas operators will be included in its overall review of the program.

RECOMMENDATION

Our report recommended that the Secretary of Transportation direct the Administrator, RSPA, to improve state agency inspection activity reporting and MTB's monitoring of state agency pipeline safety programs by

--using more performance-oriented measures to evaluate state agency actions in enforcing federal pipeline safety standards, which would include revising the monitoring form to eliminate irrelevant questions, redesigning other questions to provide more meaningful data, and developing additional questions to evaluate state program performance;

--providing the regional offices with additional guidance to assure consistent interpretations of the questions on the monitoring form;

--updating criteria used to determine the minimum level of state inspection activity or establishing new criteria for this purpose;

--clarifying instructions provided for data collection and reporting by state agencies, particularly for data on inspection days, operators inspected, noncompliances, and enforcement actions; and

--having the regional offices (1) review and advise headquarters as to the probable accuracy of the program activity data at the time the state agencies submit such data and (2) devote more time to verifying the accuracy of these data during their annual monitoring visits.

Our report also recommended that the Secretary of Transportation direct the Administrator, RSPA, to better define state inspector qualifications and training requirements and assist the states in obtaining the needed inspector training by

--identifying what knowledge and skills are necessary to conduct effective inspections of operators;

--determining what training the states' inspection workforce needs to conduct effective inspections; and

--working with the states to determine the most efficient and effective way for all state inspectors to obtain the identified training needs within a reasonable time period.

Agency comments and actions taken

In responding to OMB Circular No. A-50, and in its March 26, 1985, memorandum the Department stated that MTB (1) has redesigned its state monitoring form and it is being used to monitor calendar year 1984 state programs; (2) has provided regional offices with guidance to assure consistent evaluations of program adequacy during monitoring; (3) reviewed and updated criteria for the minimum level of state inspection activity; (4) issued new instructions to states for data collection relating to inspection days, operators inspected, noncompliances, and enforcement

actions; and (5) will have the regional offices verify the accuracy of state program activity data during their state monitoring visits.

The Department stated that the qualifications which a state inspector should possess will be made known to each state agency by MTB staff during annual monitoring visits and during annual meetings with the staff of each state agency on a regional basis.

The Department stated that the MTB will generally require attendance at all pipeline safety courses for each state pipeline safety inspector within a 3-year period from start of employment as an inspector.

RECOMMENDATIONS

Our report recommended that the Secretary instruct the Administrator, RSPA, to

--gather and analyze the data necessary to determine whether there are sufficient hazards, involving personal injury or environmental damage, to warrant regulation of rural gas gathering lines, gas service lines, hazardous liquids storage facilities, and substances transported in liquefied form that are not presently regulated and

--take appropriate actions to amend the regulations and, in the case of rural gas gathering lines and/or gas service lines, propose the legislation needed to provide coverage of those additional pipeline facilities that warrant coverage.

ATTACHMENT I

Agency comments and actions taken

In responding to OMB Circular No. A-50, the Department stated that the issues of regulatory coverage and the relative roles of each level of government will be best addressed in its overall review of the program. In addition, the Department stated that it will also initiate a study in fiscal year 1985 on the safety performance of hazardous liquid storage facilities that are associated with pipeline transport.

The Department has initiated a study of the risk of all hazardous liquid pipeline terminal storage. The study is expected to be completed in calendar year 1985. The Department is aware of only one unregulated substance transported an appreciable distance--liquefied carbon dioxide. The Department will be collecting information on liquefied carbon dioxide and other substances to determine if they should be studied.

The CHAIRMAN. We will turn to Mr. Thomas now and then follow with questions.

Mr. THOMAS. Thank you, Mr. Chairman. I am pleased to appear before your committee today to describe the Federal role in hazardous liquid pipeline safety and to discuss any questions you might have regarding our role, particularly as it pertains to the Transgulf pipeline.

The Transgulf pipeline is an interstate, hazardous liquid pipeline. The Hazardous Liquid Pipeline Safety Act of 1979 gave responsibility to the Department of Transportation for the safety regulation of pipelines transporting hazardous liquid. The Department has regulatory authority for both inter and intrastate pipelines. Regulation and enforcement of the Federal rules for interstate pipelines is the exclusive responsibility of the Federal Government.

The law, however, allows the States to adopt the Federal safety standards and inspect and enforce those rules for intrastate systems. The purpose of the law is to protect the public safety against the risks to life and property which are associated with the pipeline transportation of hazardous liquids.

With respect to interstate hazardous liquid pipelines, the Department has rules currently in place and has the responsibility for enforcement of those rules. These standards apply to the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities.

The Department authority does not extend to nonpipeline environments which may as a consequence be affected by pipeline incidents or to the selection of the location of a pipeline. Transgulf plans to convert the pipeline to a hazardous liquid line. The Transgulf pipeline is required to follow our rules. Further, we have met with Transgulf and reviewed the project timetable and will review Transgulf specific conversion plans shortly to assure that our standards are met.

When the line is actually converted and periodically as hazardous liquid is pumped through the system, our Federal pipeline inspectors will monitor the pipeline. In this country pipelines move about half of the 2 billion tons of petroleum and petroleum products transported annually through approximately 65,000 miles of pipeline. The safety record for pipeline transportation of hazardous liquids is very good.

Last year there were 5 fatalities and 18 injuries caused by 190 hazardous liquid pipeline accidents. I have attached an exhibit which summarizes the 1985 liquid pipeline accidents by cause and by type of commodity. Also included is a 13-year accident summary which shows both the extremely low number of accidents, injuries, and fatalities, and the overall downward trend.

That concludes my prepared statement. I would be pleased to answer any questions.

[Information supplied follows:].

Table 7

SUMMARY OF LIQUID PIPELINE INCIDENT REPORTS RECEIVED IN 1985

INCIDENT SUMMARY BY CAUSE

CAUSE	# OF INCIDENTS	% OF TOTAL	LOSS (BARRELS)	TOTAL DAMAGES	% OF TOTAL	DEATHS	INJURIES
Internal Corrosion	17	8.95	4,582	$ 83,670	1.66	0	1
External Corrosion	40	21.05	29,318	$1,190,399	23.57	0	0
Defective Weld	0	.00		$	.00	0	0
Incorrect Operation	16	8.42	30,113	$1,619,500	32.04	0	1
Defective Pipe	8	4.21	25,032	$ 316,000	6.26	0	0
Outside Damage	53	27.89	55,629	$ 804,277	15.92	1	3
Malf. of Equipment	2	1.05	956	$ 29,250	.58	0	0
Other	54	28.42	39,252	$1,021,444	20.22	4	13
TOTAL	190	100.00	184,899	$5,050,740	100.00	5	18

INCIDENT SUMMARY BY COMMODITY

COMMODITY	# OF INCIDENTS	% OF TOTAL	LOSS (BARRELS)	TOTAL DAMAGES	% OF TOTAL	DEATHS	INJURIES
Alkyate	0	.00		$	.00	0	0
Crude Oil	97	51.05	89,362	$2,487,662	49.25	1	1
Gasoline	49	25.79	26,548	$ 672,138	13.31	3	6
Natural Gas Liquid	11	5.79	26,704	$ 6,303	.12	0	0
Fuel Oil	9	4.74	5,286	$ 547,405	10.84	0	1
L.P.G	9	4.74	29,027	$ 270,090	5.35	0	2
Jet Fuel	4	2.11	2,218	$1,025 079	20.30	1	7
Diesel Fuel	5	2.63	2,712	$ 10,100	.20	0	0
Anhydrous Ammonia	2	1.05	226	$ 500	.01	0	1
Kerosene	2	1.05	1,299	$ 29,010	.57	0	0
Turbine Fuel	1	.53	100	$ 200	.00	0	0
Oil and Gasoline	0	.00		$	.00	0	0
Condensate	0	.00		$	.00	0	0
Fert., Anhy. Nitr.	1	.53	1,417	$	.00	0	0
TOTAL	190	100 00	184,899	$5 050,740	100.00	5	18

Table 8

SUMMARY OF LIQUID PIPELINE ACCIDENTS AND CASUALTIES FROM 1974 TO 1985

Year	Failures	Fatalities	Injuries	Total Commodity Loss (bbl.)
1973	273	7	10	377,672
1974	256	10	6	292,001
1975	254	7	17	318,278
1976	212	5	4	249,690
1977	237	3	15	224,794
1978	256	3	10	280,794
1979	251	4	13	548,669
1980	219	3	12	289,445
1981	239	5	32	214,384
1982	200	1	6	221,411
1983	161	6	9	384,670
1984	203	0	19	292,126
1985	190	5	18	184,899

The CHAIRMAN. We will put your full statements in the record as though fully delivered and turn to Senator Hawkins at this time.

Senator HAWKINS. I understand Senator Hatch has to leave shortly. I have several questions I would like to submit in the record for both of you, if you do not mind, in order to expedite.

Mr. THOMAS. No problem, Senator.

Senator HAWKINS. Thank you very much.

The CHAIRMAN. The Department of Transportation, it seems to me, confirms that safety and enforcement can fall somewhat between the cracks because you only have a limited number of personnel that you commit to this. Is that a fair statement?

Mr. THOMAS. Yes, sir. But I would like to correct the original testimony of Mr. Mastandrea.

The CHAIRMAN. OK.

Mr. THOMAS. There are 18 inspectors, Federal inspectors in the regions.

The CHAIRMAN. There are 18 for the 2,000 leaks that occur a year. Was Mr. Mastandrea correct that they can inspect maybe 25 or 30 pipelines a year?

Mr. THOMAS. No, sir. They inspect approximately 300.

The CHAIRMAN. 300 out of how many?

Mr. THOMAS. Well, that would be out of 2,500 or 2,600, of which 450 are Federal responsibility, when you combine the gas and the liquid operators.

The CHAIRMAN. So they can inspect about one-eighth of the total pipelines in this country per year.

Mr. THOMAS. Yes, sir.

The CHAIRMAN. That is still not a very high percentage. I am not finding fault. I am saying you are limited by the amount of personnel you have; is that correct?

Mr. THOMAS. Yes, sir.

The CHAIRMAN. There has to be a joint partnership with the States; is that correct?

Mr. THOMAS. That is correct.

The CHAIRMAN. And especially here in Florida; is that right?

Mr. THOMAS. We have relationships with two State agencies on natural gas and LP gas, but not on the hazardous liquid.

The CHAIRMAN. What is your relationship with the State of Florida?

Mr. THOMAS. The State of Florida acts as our agent in monitoring——

The CHAIRMAN. So, in other words, you are relying upon them.

Mr. THOMAS. Yes.

The CHAIRMAN. Is that correct?

Mr. THOMAS. For intrastate.

The CHAIRMAN. That is right, and if Florida does not monitor and do the job intrastate, then nobody is going to do the job; is that correct?

Mr. THOMAS. We will do the job.

The CHAIRMAN. You will try to do the job.

Mr. THOMAS. Yes, sir.

The CHAIRMAN. To the limited extent of your abilities, with which I am not finding fault. I think Congress has not given you

enough resources to really do the job when you can only inspect one-eighth of the total pipelines in this country per year.

Am I also correct that from an accident inspection standpoint, how many of those do you have?

Mr. THOMAS. We had 190 significant liquid accidents.

The CHAIRMAN. No. But I mean how many accident inspectors do you actually have?

Mr. THOMAS. They are part of our 18.

The CHAIRMAN. How many are there?

Mr. THOMAS. Well, our inspectors monitor——

The CHAIRMAN. Are all 18 accident inspectors?

Mr. THOMAS. They are trained engineers and they monitor pipeline systems for compliance and they also investigate the accidents.

The CHAIRMAN. OK. So all 18 of them you say?

Mr. THOMAS. Yes, sir.

The CHAIRMAN. Mr. Blume, I have a lot of questions for you because I think the Federal Government is maligned on both counts, sometimes because they are so over-regulatory and sometimes because they do not have the assets to do the job and have to rely on the partnership with the States to do it. Is this your main concern?

Mr. BLUME. I think our concern is that it is time for the Department to reassess its role with that of the States to see how resources can be better shared, along with responsibility.

The CHAIRMAN. I think you have to admit that sometimes the States are not doing the job; is that right?

Mr. BLUME. We did not really look at the States. The States are really a voluntary participant in the program.

The CHAIRMAN. So States will only voluntarily participate when the Federal Government does not have the assets. Is that what you are pointing out?

Mr. BLUME. That is what the Department's problem is, and tbe States themselves are reluctant because the Federal Government has not participated up to the full financial responsibility that it could do, up to 50 percent.

The CHAIRMAN. All right. The people in Florida cannot ignore this.

Mr. BLUME. If I could interrupt for one moment, Senator, to just point out that the State has not agreed to participate in the liquid program.

The CHAIRMAN. Do you mean the State of Florida has not?

Mr. BLUME. That is correct, sir, nor do they have legislation to permit them to——

The CHAIRMAN. They must take this issue seriously. I was im pressed with Mr. Dorris' testimony, although I think there are seme inconsistencies. But when just 1 barrel leaks and you have a tremendous spill in areas of Florida, it can be a tragedy.

I found your testimony intriguing. You do not have any axes to grind. I know what the GAO does.

Mr. BLUME. You are my boss. [Laughter.]

The CHAIRMAN. But you do not have any axes to grind. I think you do a terrific job.

Mr. BLUME. Thank you, sir.

The CHAIRMAN. And you do it always badgered by both sides. I just want to tell you that I have tremendous respect for you. But

you say, "We found that the Department," and this is the Department of Transportation, "has not provided adequate inspection coverage of the interstate and intrastate pipeline operators for which it has responsibility. In addition, the Department's inspection coverage may be reduced further because most States indicated that they do not plan to assume responsibility for, one, the interstate gas pipelines for which the department is now responsibile or, two, the intrastate hazardous liquid pipelines in their States when the Federal amended to cover these pipelines sometime later this year."

That is a correct statement, is it not?

Mr. BLUME. That is correct, sir.

The CHAIRMAN. And Florida is one of those States that has not assumed that.

Mr. BLUME. It is my understanding that they are not one of the States.

The CHAIRMAN. Well, if Florida State is not doing the job, and you say the Federal Government does not have the resources to do the job right now, and even with current resources it is not utilizing those as well as it could.

Mr. BLUME. That is a fair characterization of our report.

The CHAIRMAN. I read an editorial down here accusing this hearing of being politically motivated. However, your testimony, is very crucial. I hope the pipeline can be put in. I hope it can be put in with all the safety features that need to be on it. But your testimony notes that the buck is being passed between the State and the Federal Government and neither of them is doing the job—especially here in Florida.

There are some States where I think they do try to do the job. California may be one. Is that a fair cbaracterization?

Mr. BLUME. To some degree. California also has cut back, too.

The CHAIRMAN. Is that right? But at least they require a lot more than Florida does.

Mr. BLUME. That may be true.

The CHAIRMAN. I am concerned about the public health and the public interest in Florida. I have no doubt in my mind that if the State raises certain safety standards, that Transgulf, being the good company that it is, will meet those standards. But they aren't going to meet them voluntarily.

Mr. BLUME. I would only characterize, and I think we have to be a little bit cautious, but it is in the best interest of the pipeline companies to maintain safety. It does not do them any good to have an accident. It is a very good question, and I think the Federal Government has taken that role through the Congress and the laws to make sure oversight of the pipelines through the Department of Transportation is provided.

The CHAIRMAN. But unless somebody takes the responsibility in the State to provide oversight, it is not going to be completely monitored. Is that right?

Mr. BLUME. It is a combination of the two.

The CHAIRMAN. So that is a fair comment?

Mr. BLUME. I believe so.

The CHAIRMAN. And it is a fair concern to be raised in this matter.

Mr. BLUME. I have no problem with it, Mr. Chairman.

The CHAIRMAN. And it is a fair concern where you are involving aquifers and other matters of public health?

Mr. BLUME. I would think so.

The CHAIRMAN. I think so, too. Thank you very much. We are glad to have both of you here. Thank you for your testimony.

The next witness is Mr. Charles Lee, senior vice president of the Audubon Society, Florida chapter. I understand the last witness today will be Lane Harrington or David Gluckman of the Florida chapter of the Sierra Club, Tallahassee, FL.

STATEMENT OF CHARLES LEE, SENIOR VICE PRESIDENT, FLORIDA AUDUBON SOCIETY

Mr. LEE. Senator Hatch, Senator Hawkins, other distinguished staff and members, I am Charles Lee, senior vice president of the Florida Audubon Society. Florida Audubon is the State's oldest and largest enviornmental organization, founded in your own hometown of Maitland, Senator Hawkins, in the year 1900. We have 35,000 members and 46 local chapters statewide.

I am here today to provide you with our position and some background with regard to the Transgulf pipeline project, a matter which has seen the detailed involvement of the society for over 12 years, since 1974 when our organization first researched the issue and acted through its board of directors to take a position.

Before I do that, I would like to take the brief opportunity to thank you for your action on a couple of environmental issues of great concern to us here in Florida and, Senator, to ask about the status of them.

As was widely noted in tbe press due to a new conference attended by the major environmental organizations, State and national, in Washington in December, you acted to file much needed legislation that will belp reinforce tbe State of Florida's longstanding opposition to oil and gas drilling in certain sensitive areas of the Gulf of Mexico. We think that that bill you introduced is a great legislative idea, but we have not heard very much about its status since the press conference in December. Perhaps either now or at the conclusion of the hearing you or your staff could update us on the prospect for success on that important issue.

Also we were greatly pleased, Senator Hawkins, when you acted last year to introduce legislation to establish the Fakahatchee National Wildlife Refuge in Collier County to aid in the protection of the critically endangered Florida panther.

Since you were not able to join the Everglades Coalition and the State of Florida at the Everglades Coalition Conference held in Naples in January, where we were hoping to hear an update on this very important bill, we would be most interested to learn of the current status of this legislation that you filed. We feel it is very important and we would be glad to see you and your staff after this meeting if that is possible.

The CHAIRMAN. When were those filed, in December of last year?

Mr. LEE. No; one was filed in December 1985 and the other was filed much earlier in 1985. The month I frankly forget, Senator.

The CHAIRMAN. Maybe I can bring you up to date on that.

Mr. LEE. Good.

The CHAIRMAN. I have been working on all kinds of legislation. It took us about 10 years to get a major piece of consumer protection legislation through, which is law now—and Senator Hawkins played an active role. It is considered some of the most important consumer legislation in the last 20 years. I also commend her for about 30 other bills that she has had a major participation in that we have just had to work our tails off for the last 4 or 5 years to get enacted. It does take time.

The bill was introduced, but it still has to be considered by the appropriate Senate committee. It has to be examined. It has to be evaluated. Hearings need to be held and individuals will testify. And so the bills you asked about are going through the process.

I will also tell you this: Florida is fortunate to have a Senator who is as active as Senator Hawkins.

Mr. LEE. Thank you, Senator. We would appreciate being able to talk with the staff. I am sure that they will be cooperative. They always are.

Senator HAWKINS. They would rather talk in Florida than they would in DC.

Mr. LEE. Senator, I am glad to say that at least one point we were in clear agreement with you on this issue. On June 4, 1982, in your letter to Mr. Charles Butler, Chairman of the Federal Energy Regulatory Commission, you wrote:

> I must commend the Federal Energey Regulatory Commission staff for the work they have done in flushing out all of the possible objections to the pipeline conversion. Close scrutiny of a project of this magnitude is always in the public's best interest. It should also be remembered that the public interest also requires a timely decision in such regulatory matters. As long as the decision is delayed, the rate payers of Florida could be losing as much as $2 to $3 million per month.

While you did not actually urge the Commission to make a particular decision, I think your 1982 position was a very good one, and it was based on accurate and well developed information from your staff.

The Transgulf project is one that the Florida Audubon Society decided to support because we believe it provides an environmentally better alternative to the transport of petroleum into Florida by other means.

Our board of directors made that decision in 1974 after reviewing a detailed environmental assessment of the project. We learned, among other things, that the 230,000 miles of liquid petroleum pipelines in the United States have a well monitored safety record, a record that was looked at carefully the the Federal Energy Regulatory Commission staff.

Senator, the words "environmental impact statement" strike terror in the hearts of developers of all kinds of projects. It is well known that the requirement of an envirionmental impact statement and its extensive periods for regulatory agency comments and public comments can add years to the processing of permits for any given proposal.

The Transgulf project is one which has the rare distinction of having been through the Federal environmental impact statement process twice. This dual review occurred due to changes in the project designed to increase the natural gas transmission system

capacity. These two opportunities for EIS review means that the National and State environmental groups and other agencies an an opportunity at two different stages in the 9-year proceeding before FERC to consider and to reconsider their positions. As an intervenor in the Federal Energy Regulatory Commission proceedings, the Florida Audubon Society had the opportunity review every pleading, every exhibit, every study and report submitted by all the parties.

Much of that material consisted of extensive documents prepared by the Maritime Intervenors, a group of marine shipping interests generally headquartered here at Fort Lauderdale who desire to stop the pipeline because it would compete with their businesses for petroleum transport. These interests would like to avoid that $2 to $3 million per month cost differential between maritime shipping and pipeline transportation costs that you referred to as a savings to the rate payers in your very excellent letter to the FERC in 1982.

They know that as less efficient entities per ton-mile, marine shipping modes cannot compete well with pipelines without a major reduction in their profit margin. Even though the interest of the Maritime Intervenors is clearly economic in nature, with the record of the case before FERC, it is clear that the tactics of these groups in other forums has been to primarily raise environmental objections to the pipeline project.

These objections continue to be proposed by the Maritime Intervenors even though they have been specifically considered and rejected by the FERC as unsupported by competent evidence and testimony.

I would refer to you the extensive attached exhibits including all of the relevant materials in the FERC process with the exception of the environmental impact statements, which frankly were just too bulky to add another 4 inches to the pile. We know they are of record and available to you.

Even though Florida's major environmental groups have been specifically presented with this body of argument and studies on numerous occasions, they have consistently rejected these claims as unworthy of their support. We have attached a copy of a recent expression of the sentiment of the major organization group leaders on this subject as an exhibit to this testimony.

We have also attached a deposition of one of the chief witnesses utilized by the maritime interests in attempting to build their environmental argument, a Mr. John R. Mastandrea of NDE Technology, Inc., Torrance, CA. I believe, Senators, that this deposition which was taken under oath discloses accurately the limitations of Mr. Mastandrea's alleged expertise. It should be mandatory reading for anyone reviewing the credibility of his many claims and his recommendations.

We strongly suggest that the issues the maritime interests attempt to raise through this paid consultant be evaluated by disinterested experts with recognized qualifications.

Now, I would like to depart for 1 second, because it is relevant in this area, to add something I had not planned introducing as evidence in this proceeding. I would like to give you a copy, Senators,

of the lobbyist registration from the legislative year 1983 of one Marva Davis.

The CHAIRMAN. I did not swear all of you in. I wonder if we also have a Doris Frazier, who is a public witness that would like to testify. Ms. Frazier, are you here? Will you join the witnesses at the table? We will be happy to hear a short statement from you as well. Will you all stand and raise your hands.

Do you solemnly swear to tell the truth, the whole truth and nothing but the truth, so help you God.

[Chorus of ayes.]

The CHAIRMAN. Will that include your prior testimony?

Mr. LEE. That includes everything since I began speaking.

The CHAIRMAN. That will be fine.

Mr. LEE. I would like to submit this.

The CHAIRMAN. Without objection, we will place it in the record.

[Information supplied follows:]

Harold J. Davis

Name (please PRINT — first name first)

229 E Washington St

MAILING address (street, city, and zip)

Gleiney, Fla. 32351

Fla. Alliance ✓

Principal represented

P.O. Box 21751

Principal's address (if different)

Fort Lauderdale, Fla 33335

904-875-9360

Business telephone

S/A

Tallahassee address and telephone

L-1

use separate card for EACH principal

AFFIDAVIT OF JOINT SENATE-HOUSE LOBBY REGISTRATION

Groundwater Bill

Legislative interest, general and specific

Do you have any direct business association with a current member of the Legislature? ☒ None ☐ Yes. If so, explain.

(continue to back of card)

I do solemnly swear that all of the foregoing facts are true and correct and that I have read 11.045, Florida Statutes, and am aware of the requirement for periodic reporting.

Harold A. Davis

Signature

State of Florida, County of

Leon

Sworn to and subscribed before me this 8 day of June, 1983

Sandra J Sargent

Notary or Deputy Secretary/Clerk

Mr. LEE. For the record, it is a lobbyist registration indicating Ms. Davis' representation of the Florida Alliance, the marine shipping interest, in the 1983 legislation.

The major issue that is raised by these Maritime Intervenors and their lobbying organization, the Florida Alliance, is the alleged threat of the pipeline to ground water. Certainly, no one would contend that there is absolute certainty that the pipeline will not leak. The record of 230,000 miles of pipeline throughout the Nation reveals that there have been leaks, and the reduction of potential for leaks and the development of cleanup strategies is a legitimate concern.

The fact is, Senators, that a large part of the Nation, some estimates say up to 60 percent of the population, depend upon ground water for their drinking water supplies. The 230,000-mile system of pipelines that carry petroleum in the United States overlay many areas where ground water is the major potable source. The record of pipeline safety, based on the information available to FERC, EPA, and DOT simply does not support the proposition that these pipelines, which cover most of the Nation like a spider's web, have historically presented a significant threat to ground water.

The irony, Senator Hawkins and Senator Hatch, is that we know that petroleum products in Florida are having an extensive and serious impact on ground water of almost crisis proportions, and we know, thanks to the work of the Florida Department of Environmental Regulation—an agency which, Senator, I really believe should have been invited to give testimony at this hearing—we know just where the petroleum contamination is coming from.

Senator HAWKINS. I would like to say that they were invited. They declined.

The CHAIRMAN. Mr. Lee, I wonder if you would bring your testimony to a close. We will put the complete statement in the record, but you have had about 10 minutes.

Mr. LEE. Senator, I am going to go as quickly as I can, but I do feel that these points need to be made.

Senator HAWKINS. It will all be in the record.

The CHAIRMAN. I will give you a few more minutes. Every other witness has tried to cooperate. Now, you have had 10 minutes. You may continue a few more minutes.

Mr. LEE. I am not sure how long my testimony will be.

The CHAIRMAN. I have read it and I take cognizance of it. We will put it in the record without question, but if you could summerize, it would help us.

Mr. LEE. DER has already discovered 400 leaking underground tanks that have been identified at service stations and other establishments. They know that there are at least 6,000 others out there projected as leaking tanks.

Addressing this problem is a major priority of the State. The legislation that has been passed in the last 2 years, plus legislation under consideration this year, is a major attempt to address this very real central part of the ground water problem.

I think it is important to note that the kind of monitoring and protection systems that are being proposed for inclusion in the Transgulf project are very similar to the prevailing methods for solving the storage tank problem. If tanks in the ground today

were fitted with a fraction of the safeguards proposed in the Transgulf project, we would not have this urgent problem.

Finally, Senator, I would like to comment briefly on the safety additions that have been suggested at this hearing and recent press conference. I would like to point out that our organization is one that prides itself on taking a very strong enviriironmental position, levying against a given project the greatest amount of caution that is conceivable.

We concur that the highest level of technical safety is needed on the pipeline, but we do not necessarily concur that the specific recommendations you have made are based on the best technical advice as to how to achieve that goal.

Now, I want to be very specific. I am not an engineer; I am not an expert; I rely on the material that is available to me from a variety of sources, including specifically the Federal agencies in the appendixes to our testimony here today.

The CHAIRMAN. Have you not been a little bit alarmed that the last two Federal employees who testified, that they are relying on the State to do the job, and you are relying on the Federal agencies to do the job. They are clearly not doing it and not because they do not want to.

Mr. LEE. I think I can answer that.

The CHAIRMAN. I think they answered it. They said it is just not being done.

Mr. LEE. Senator, if I could fully respond, I think I can answer that. The department of environmental regulation has an agreement that has been executed with Transgulf and is assured of the ability to review and comment on the final design stages of this project, all of the things you were talking about in terms of spacing of valves, the number of valves, whether they are automatic or not automatic, the design of the redundant computerized safety system. All of those things will receive input from the Florida Department of Environmental Regulation.

The CHAIRMAN. I have a feeling they will do a much better job after this hearing is completed.

Mr. LEE. Senator, I think my confidence level in what they are doing, having had some direct involvement in it at the department level in Tallahassee, is that they were doing a pretty good job before this issue ever surfaced a couple of weeks ago.

Tbe design is something that is being roked on very directly.

I would like to make one comment about one of the safety recommendations that has been made, the annual hydrostatic test. We are quite concerned because such tests have not been found very practical enough to have advantage to make them worthwhile in the Federal system. In addition—and I think this is very important considering Florida's serious water problems—conducting a hydrostatic test after the pipeline has been used to transport petroleum products presents environmental risks and problems in its own right.

This procedure involves the displacement of oil in the pipeline with water, which then must be removed completely from the pipeline. The water used in the hydrostatic test would mix with oil residue in the pipeline and create a significant potential for pollution when that waster is removed after the test.

Treatment facilities for many, many millions of gallons of contaminated water that would contain residue holding heavy metals and other hazardous materials in addition to petroleum would have to be constructed. At best, the requirement of this procedure on an annual basis would create a major water treatment requirement and a pollution discharge which is not now contemplated by the pipeline project.

At worst, the project would add to Florida's already serious water quality problems.

I would like to go on to the conclusion now because I do think that some of these points have been covered by other witnesses. I would like to mention one more technical point, though, in closing.

There has been a lot of focus on the closure of valves as the method to control.

The CHAIRMAN. No, no. They only use one method to solve the problems. Even they admit that.

Mr. LEE. Well, I think you need to know that as far as stopping a leak, the closure of valves is something that at least according to our knowledge of wbat the industry could do is a secondary action. Closure of valves does not stop.

The CHAIRMAN. I do not think anybody differs with that. If you do not have the valves in the right place and they have to be manually closed and it takes an hour to get to them, you can have a lot of problems here in Florida before you close them off.

Mr. LEE. Senator, the right place may not and often is not an arbitrary distance of 2 miles apart.

The CHAIRMAN. We were not suggesting that. We are saying it may not be 27 miles apart either. We do not know how far it is, but we know the average shut off valves are 6 miles now. So you know some of them are going to have to have big distances between.

Mr. LEE. Senator, fortunately no one knows how far they should be placed yet because that element of the final engineering design has not yet been completed. If it were completed on an arbitrary basis without proper engineering, I would be very concerned, but I know it is not.

The CHAIRMAN. Well, I think you are watching it carefully and I am very appreciative of that.

Mr. LEE. Senators, I would like to return to the closing part of our statement.

In conclusion, we believe, Senator Hawkins, that you were absolutely correct in your remarks to the Federal Energy Regulatory Commission in 1982. It is time to get on with the final design refinements of this system and to support its timely construction. Not only——

Senator HAWKINS. Excuse me. Have you seen those design refinements? Mr. Dorris has not seen them. Have you seen them, Mr. Lee?

Mr. LEE [continuing]. Obviously, Senator, if Mr. Dorris——

Senator HAWKINS. Answer the question.

Mr. LEE [continuing]. I have not seen them.

Senator HAWKINS. All right. Thank you.

Mr. LEE. The Transgulf pipeline project will, in our opinion, provide an environmentally superior means of bringing petroleum products to Florida. It will also lessen the need for environmentally

destructive projects to be advocated by the shipping interests, such as the missing link of the west coast intercoastal waterway, the cross Florida barge canal, and particularly here in Fort Lauderdale, the recently proposed destruction of nearly 20 acres of prime wetland habitat at Port Everglades for a new turning basin for the port, mangroves which might be more easily preserved once 350,000 barrels per day of petroleum come to Florida customers by pipeline.

Senators, this is an easy issue to misrepresent because it involves complex technology and engineering decisions. Maritime interests who want to stop or delay the pipeline have become artists at misrepresenting this issue in terms that raise public fears, fear that knowing the average Floridian's concern for the environment are clearly easy to arouse.

As an environmental organization that must preserve its credibility by a constant focus on the truth, we feel an obligation to inform the public when their great sensitivity to environmental protection issues is abused by interests with economic motives who who wish to manufacture environmental arguments to achieve other goals.

This, Senators, we firmly believe is one of those cases, and we hope, Senator Hawkins and Senator Hatch, and we trust that you will promptly recognize that fact and deal with the issue accordingly.

Thank you.

[The prepared statement of Mr. Lee follows:]

TESTIMONY OF CHARLES LEE
SENIOR VICE PRESIDENT
FLORIDA AUDUBON SOCIETY
1101 Audubon Way Maitland
Maitland, Florida 32751

BEFORE THE CHILDREN, FAMILY, DRUGS , AND
ALCOHOLISM SUBCOMMITTEE OF THE SENATE
LABOR AND HUMAN RESOURCES COMMITTEE

February 17, 1986

Senator Hawkins, and other distinguished members of the Subcommittee: I am Charles Lee, Senior Vice President of the Florida Audubon Society. Florida Audubon is the State's oldest and largest environmental organization, founded in your own hometown of Maitland in the year 1900, with over 35,000 members and 46 local chapters statewide.

I am here today to provide you with our position and some background with regard to the Transgulf Pipeline Project, a matter which has seen the detailed involvment of the society for over 12 years, since 1974, when our organization first researched the issue, and acted through its board of directors to take a position.

Before I do that, I would like to take the opportunity to thank you for your action on a couple of environmental issues of great concern to us in Florida, and to ask about the status of them.

As was widely noted in the press due to a news conference attended by major national environmental organizations, and our organization in Washington in December, you acted to file much needed legislation which will help re-enforce the State of Florida's longstanding opposition to oil and gas drilling in certain sensitive areas of the Gulf of Mexico. We think that the bill you introduced is great legislation, but have not heard much about its status since the press conference in December. Perhaps, either now or after the hearing, you or your staff could update us on the prospect for success on that issue.

Also, we were greatly pleased when you acted last year to introduce legislation to establish the Fakahatchee National Wildlife refuge in Collier County, to aid in the protection of the critically endangered Florida Panther. Since you were not able to join the Everglades Coalition and the State of Florida at the Everglades Coalition Conference held in Naples in January, where we were hoping to hear an update on this very important bill, we would be most interested to learn of the current status of the legislation you filed, which we feel is an important step forward for the Florida environment. I would be glad to arrange to meet with you, and your staff after the meeting to discuss these issues of mutual concern.

Senator Hawkins, I will now turn to the issue at hand, the Transgulf Pipeline. While I am uncertain of the exact jurisdiction of this Subcommittee to actually produce a legislative product to deal with this matter, we are happy to be able to provide you with more information about it, and our position.

I am glad to say that at least at one point we were in clear agreement with you concerning this issue. On June 4, 1982 in your letter to Mr Charles Butler, Chairman of the Federal Energy Regulatory Commission, you wrote:

> I Commend the Federal Energy Regulatory Commission staff for the work they have done in flushing out all of the possible objections to the pipeline conversion. Close Scrutiny of a project of this magnitude is always in the publics best interest. It should be remembered that the public interest also requires a timely decision in such regulatory matters... As long as the decision is delayed the rate payers of Florida could be losing as much $2 to $3 million dollars per month.

While you did not actually urge the Commission to make a particular decision, I think your 1982 position was a good one, and was based on accurate and well developed information from your staff.

The Transgulf project is one we decided to support because it provides a better alternative to the transport of petroleum into Florida by other means. Our board of directors made that decision in 1974 after reviewing a detailed environmental assessment of the project. We learned among other things that the more than 230,000 miles of liquid petroleum pipelines in the United States have a well monitored safety record, a record that was looked at carefully by the Federal Energy Regulatory Commission staff. The words "Environmental Impact Statement" strike terror in the hearts of the developers of all kinds of projects. It is well known that the requirement of an environmental impact statement and its extensive periods for regulatory agency comments and public comments can add years to the processing of permits for any given proposal. The Transgulf project is one which has the rare distinctinon of having been through the federal Environmental Impact Statement process twice. This dual review occured due to changes in the proposed project designed to increase the capacity of the natural gas transmission system which will be completed as a part of the conversion. Two opportunities for EIS review means that the state and National environmental groups and agencies had a chance at two different stages in the 9 year proceeding before the Federal Energy Regulatory Commission to consider, and reconsider their positions. As an Intervenor in the Federal Energy Regulatory Commission proceeding, the Florida Audubon Society had the opportunity to review every pleading and exhibit, every study and report submitted by all parties. Much of that material consisted of extensive documents prepared by the "Maritime Intervenors" a group of marine shipping interests generally headquartered here at Fort Lauderdale who desire to stop the pipeline because it would compete with their businesses for petroleum transport. These interests would like to avoid that $2 - $3 million dollar per month cost differential between maritime shipping and pipeline transportation costs that you referred to as a savings to rate payers in your letter to FERC in 1982. They know that as less efficient entities per ton mile, marine shipping modes cannot compete well with pipelines without major changes in profit margin.

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Even though the interest of the Maritime Intervenors is clearly economic in nature, the record of the case before FERC, and the tactics of these groups before other forums has been to primarily raise "environmental" objections to the pipeline project. These objections continue to be proposed by the Maritime intervenors, even though they were specifically considered and rejected by the FERC as unsupported by competent evidence and testimony (see attached exhibits), and even though Florida's major environmental groups have been specifically presented with this body of argument and studies on numerous occaisons, and have consistently rejected the claims as unworthy of support. I have attached a copy of a recent expression of the sentiments of a large number of Florida's environmental group leaders on this subject as an exhibit to this testimony. We also have attached a deposition of one of the chief witnesses utilized by the maritime interests in attempting to build their environmental arguments, a Mr. John R. Mastandrea of NDE Technology Incorporated, Torrance California. I believe that this deposition, taken under oath, discloses accurately the limitations of Mr. Mastandrea's alleged expertise, and should be mandatory reading for anyone reviewing the credibility of his many claims, and his recommendations. We strongly suggest that the issues that the maritime interests attempt to raise through this paid consultant be evaluated by disinterested experts with recognized qualifications.

The major issue raised by the Maritime Intervenors and their new lobbying organization, the Florida Alliance, is the alleged threat of the pipeline to groundwater. Certainly, no one would contend that there is absolute certainty that the pipeline will not leak. The record of the 230,000 miles of pipelines throughout the nation reveals that there have been leaks, and the reduction of the potential for leaks and development of cleanup strategies is a legitimate concern. The fact is that a large part of the nation, some estimates say up to 60% of the population depend upon groundwater for their drinking water supplies. The 230,000 mile system of pipelines that carry petroleum in the United States overlays many areas where

groundwater is the major potable source. The record of pipeline safety, based upon the information available to FERC, EPA, and the Department of Transportation simply does not support the proposition that these pipelines, which cover most of the nation like a spiders webb, have historically presented a significant threat to groundwater.

The irony is that we know petroleum products in Florida are having an extensive and serious impact on ground water of almost crisis proportions. And, we know thanks to the work of the Florida Department of Environmental Regulation,(an agency which, Senator, I really believe should have been invited to give testimony at this hearing) just where the petroleum contamination is coming from. Already, over 400 leaking underground tanks have been identified at service stations and other establishments that store petroleum. Further, D.E.R. estimates that there are at least 6000 tanks in Florida out of an estimated total of 60,000 that are leaking now but have not been found. Addressing this problem is a major priority of the state, and legislation has been passed in the past four years to begin to deal with it. This year, the legislature is again considering a bill that will dramatically increase the state level attention to this problem. The kinds of monitoring, and protection systems already proposed for inclusion in the Transgulf project are very similar to the prevailing methods for solving the storage tank problem. If the tanks in the ground today were fitted with a fraction of the safeguards proposed on the Transgulf project, we would not have this urgent problem.

I would like to comment finally on the safety additions that you have suggested in recent press releases. I concur that the highest technical level of safety is needed on this pipeline, but do not necessarily concur that the specific recomendations that you have made reflect the best technical advice as to how to achieve that goal. First, it should be recognized that the final, detailed design of the safety system for the pipeline is still in process. This means that it is impossible to say at this time what the most

desirable numbers are for such things as the exact number and placement of shut off valves and other devices. This design is dependent on evaluations that are required to be performed, including some specifically related to groundwater concerns, under the 28 conditions attached to the order of the FERC. Further, the exact placement, number and kind of these devices will be determined in consideration of the recommendations of the Florida Department of Environmental Regulation. An agreement to this effect with the D.E.R. is already in place.

Second, the issue of an annual hydrostatic test has been raised. This requirement is not present anywhere on the 230,000 miles of national pipelines, with the exception of a small system of local lines in the Los Angeles County area. Such tests have not been found generally practical or to have enough advantage to make them worthwhile on the federally regulated system. In addition, conducting a hydrostatic test after the pipeline is in use to transport petroleum products presents environmental risks and problems in its own right. This procedure involves the displacement of oil in the pipeline with water, which then must be removed completely from the pipeline. The water used in the hydrostatic test would mix with oil residue in the pipeline and create a significant potential for pollution when the water is removed from the pipe after the test. Treatment facilities for many many millions of gallons of contaminated water, which would contain residue holding heavy metals and other hazardous materials in addition to petroleum, would have to be constructed. At best, the requirement of this procedure on an annual basis would create a major water treatment requirement and a pollution discharge which is not now contemplated by the pipeline project. At worse, the practice would add to Florida's already serious water quality problems.

Third, a proposal is made to require frequent inspections by electronic inspecition "pigs", on a quarterly basis. These devices, which have certain limited uses in the pipeline industry, are not necessarily useful in detecting leaks which would not also

be detected by other existing required devices. The use of these devices in the Alaska Pipeline should not be confused with the requirements of this Florida pipeline. The primary concern which is behind the special conditions adopted for the Alaska pipeline as part of the Environmental Impact Statement process is the potential of earthquake generated fractures in portions of the line which may be totally inaccessable due to snow conditons for considerable periods.

Finally, it should be remembered just what the physical sciences asscciated with a pipeline tell us about its operation, both under normal conditons, and in the event of a rupture or leak. First, unlike gas which is now transported in the 24 inch line to be converted, liquids are not compressable. This means that the only pressure in a liquid pipeline is that generated by either pumps, or gravity in mountain terrain. The vision of a continuing burst of a major quantity of petroleum in the same manner as, for example, recent television commercials have pictured the gas line fire at Vero Beach, is not a realistic expectation on a liquid product line, on Florida's flat terrain, because once pumps shut down, there is no significant pressure to sustain the release of a large quantity of product. This also relates to the proper consideration of "shutoff valves" spaced every two miles as a safety measure , as you have recommended. Pipeline leaks are not primarily halted by the closure of valves. In fact, the closure of a valve against the force of an operating pump, causes what is known as a "hammer" by the industry, a situation which leads to either failed pump or ruptured pipe. The priority action in case of leak occurance is stopping the pressure by shutdown of all pumping. Valve closure is a secondary action, done as needed, related to topography and natural features (such as river crossings) to isolate gravity flow.

In conclusion, we believe that you were absolutely correct in your remarks to the Federal Energy Regulatory Commission in 1982. It is time to get on with the final design refinements of this system, and to support its timely construction. Not only will

the Transgulf Pipeline project provide an environmentally superior means of bringing petroleum products to Florida, it will also lessen the need for environmentally destructive projects to be advocated by shipping interests -- such as the missing link of the West Coast Intercoastal Waterway, the Cross Florida Barge Canal, and even the recently proposed destruction of nearly 20 acres of prime wetland habitat at Port Everglades for a new turning basin; mangroves which might be more easily preserved once 350,000 barrels per day of petroleum move to Florida consumers by pipeline.

This is an easy issue to misrepresent, because it involves complex technology and engineering decisions. Maritime interests who want to stop or delay the pipeline have become artists at misrepresenting this issue in terms that raise public fears -- fears that,knowing the average Floridian's concern for the environment, are clearly easy to arouse. As an environmental organization that must preserve its credibility by a constant focus on the truth, we feel an obligation to inform the public when their great sensitivity to environmental protection issues is abused by interests with economic motives, who wish to manufacture environmental arguments to achieve other goals. This is one of those cases, and we hope, Senator Hawkins, that you will promptly recognize that fact, and deal with the issue accordingly.

Senator Paula Hawkins
Senate Office Complex
The Capitol
Washington, D.C. 20510

February 3, 1986

Dear Senator Hawkins:

The undersigned representatives of Florida and national environmental groups suggest that the current advertisements being run by your campaign that criticize the veto of Senate Bill 898 in 1982 are a misdirected effort.

There are over 200,000 miles of liquid petroleum pipelines in operation in the United States, under the primary regulatory jurisdiction of the Federal Energy Regulatory Commission and other federal agencies. The safety record of this pipeline system was considered by the Federal Energy Regulatory Commission when it decided to approve the conversion of Transgulf's gas pipeline to a petroleum carrier. If added safety precautions, as you suggest, are necessary, the concern is a national concern, not one applicable primarily to the veto of a bill which proposed four separate regulatory hearings before agencies inexpert in pipeline safety within one state.

Two major environmental organizations, the Florida Audubon Society, and the Florida Chapter of the Sierra Club urged the Governor to veto Senate Bill 898 in 1982, primarily because the proposed legislation was an inappropriate regulatory mechanism for pipelines, and because it was known that the sponsorship of the legislation came primarily from interests concerned basically with the economic objective of blocking the pipeline to prevent competition. One major Florida environmental organization - The Florida Audubon Society- strongly believes that the pipeline is an environmentally positive step and vigorously supports it.

Various attempts have been made by the economic interests that oppose the pipeline to enlist the support of Florida's many environmental organizations. To date, no major organization, certainly none of the undersigned, have joined with the economic interests in this effort.

We are concerned that the legitimate perception of environmental controls by the public is placed in jeopardy when concerns related to the environment are linked with interests that have primarily economic motives.

We call upon you to avoid further characterizations of this issue in terms that serve the interests of those who wish to block this one pipeline project in Florida on economic grounds. If measures to increase pipeline safety are needed, in addition to those already present, then we urge that those measures be proposed, and evaluated, on an industry wide basis outside the context of the current attempts of maritime interests to block this Florida project.

Sincerely,

Barry K. Capehart
Florida League of Conservation Voters

Lawrence V. Thompson
National Audubon Society

Senator Paula Hawkins
Page Two

Florida Conservation Foundation

Common Cause

Florida Defenders of the Environment

Florida Chapter, Sierra Club

Florida Federation of Garden Clubs

Florida Chapter, American Fisheries Soc.

(As individual) Fla. Chapter
Nature Conservancy

Florida Audubon Society

Legal Environmental Assistance
Foundation

Florida Wildlife Federation

Reply:

Barney Capehart
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1601 N.W. 35th Way
Gainesville, Fl. 32608

John C. Jones
Florida Wildlife Federation
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West Palm Beach, Fl. 33407

Larry Thompson
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Tallahassee, Fl. 32303

Bill Partington
Florida Conservation Foundation
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Winter Park, Fl. 32789

Susan Parks
Common Cause
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Tallahassee, Fl. 32301

Bill Branan
Florida Defenders of the Environment
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Hazel Simmons
Florida Federation of Garden Clubs
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Gainesville, Fl. 32604

Bernard Yokel
Florida Audubon Society
1101 Audubon Way
Maitland, Fl. 32751

John H. Hankinson
Legal Environmental Assistance
Foundation
203 N< Gadsden St.
Tallahassee, Fl. 32301

The CHAIRMAN. Thank you.
We will now turn to Mr. Mikes.

STATEMENT OF ROBERT MIKES, FLORIDA CHAPTER, SIERRA CLUB, TALLAHASSEE, FL

Mr. MIKES. No; Senators Hawkins and Hatch, I obviously am not Elaine Harrington or David Gluckman. Unfortunately, they could not appear here today.

The CHAIRMAN. That is OK.

Mr. MIKES. My name is Bob Mikes. I am chairman of the Broward County Sierra Club, and past conservation chairman of the Florida chapter.

The CHAIRMAN. We are glad to have you with us.

Proceed.

Mr. MIKES. I only need background as far as——

The CHAIRMAN. Ms. Frazier, could we get you to take the center seat and we will turn to you as soon as Mr. Mikes is finished.

Mr. MIKES [continuing]. I am an environmentalist, but I also have a background, a technical background as far as the maritime industry. I have 15 years experience with Bell Telephone Laboratories, and TRACOR Marine in their ocean technology division, mainly designing high pressure and hydraulic systems, although not on the scale of this, but I would say more complex.

I can get right into my statement. At this point, Florida Sierra has tried to remain neutral on a complex pipeline issue. Our position is based on the fact that there are potential threats to the environment and quality of life, whether we go with the pipeline or continue to expand maritime oil cargo traffic along the beaches, estuaries, and remaining reefs of South Florida.

However, when we had analyzed the issue, we find the pipeline conversion, if properly implemented, will offer a degree of control, energy conservation and ultimate responsibility unavailable under current U.S.- and foreign-flag maritime oil shipping.

We have, therefore, signed a letter as follows:

DEAR SENATOR HAWKINS: The undersigned representatives of Florida and national environmental groups suggest that the current advertisements being run by your campaign that criticize the veto of Senate Bill 898 in 1982 are a misdirected effort. There are over 200,000 miles of liquid petroleum pipelines in operation in the United States under the primary regulatory jurisdiction of the Federal Energy Regulatory Commission and other Federal agencies. The safety record of this pipeline system was considered by the Federal Energy Regulatory Commission when it decided to approve the conversion of Transgulf's gas pipeline to a petroleum carrier. If added safety precautions, as you suggest, are necessary, the concern is a national concern and not one just equitable primarily to the veto of a bill which proposed four separate regulatory hearings before agencies inexpert in pipeline safety within our State. Two major environmental organizations, the Florida Audubon Society and the Florida Chapter of the Sierra Club, urged the Governor to veto Senate Bill 898 in 1982, primarily because the proposed legislation was an inappropriate regulatory mechanism for pipelines, and because it was known that the sponsorship of the legislation came primarily from interests concerned basically with the economic objective of blocking the pipeline and to prevent competition. One major environmental organization strongly believes that the pipeline is an environmentally positive step and vigorously supports it. Others are reevaluating their positions.

Various attempts have been made by the economic interests that oppose the pipeline to enlist the support of Florida's many environmental organizations. To date, no major organization, certainly none of the undersigned, have joined with the economic interests in this effort.

We are concerned that the legitimate perception of environmental controls by the public is quite in jeopardy when concerns related to the environment are linked with interests that have primary economic motives.

We call upon you to avoid further characterizations of this issue in terms of serving interests of those who wish to block this pipeline project primarily on economic grounds.

If measures to increase pipeline safety are needed, in addition to those already present, then we urge that those measures be proposed and evaluated on an industry-wide basis outside the context of the current attempts of maritime interests to block this Florida project.

Sincerely, Colleen O'Sullivan, Chairman, Florida Sierra.

The CHAIRMAN. Thank you, Mr. Mikes.

Ms. Frazier, we will be happy to take your statement.

STATEMENT OF DORIS FRAZIER, A FLORIDA CITIZEN

Ms. FRAZIER. My name is Doris Frazier. I am a resident of Broward County and a member of the Audubon Society.

I am here to speak as a private citizen interested in the future of this State.

I feel that some of the—I could say that my remarks are made very largely on what I have been able to read in the press. I felt so strongly about some of that information that I am here this morning.

I did not realize that I would be sitting alongside the President of our State organization who speaks officially for our society. But I am very glad that this has happened because I wanted to challenge Mr. Lee to take a head count of the membership of the South Florida Audubon Society, and see where his support lies. It may be that some people have not studied this in the way that I have. But I would like to see a member vote on this subject. It is that important.

The second point I want to make is that Senator Hawkins' committee is very legitimately concerned in this business because any environmentalist who knows what is happening knows that the ground water in south Florida is not the same as the ground water in the State of Iowa, or some of these other places where they have pipelines. It overlies the Biscayne aquifer, a body of water that is essential not only to the residents of south Florida but to the State as a whole economically.

Now, it has been proved that the ground water does invade the aquifer. I move on to the fact that wherever you have a pipeline, you inevitably have the possibility of leaks. No one denies that. No one that I know of.

If this should occur in a land area where food crops are raised, where the ground water is indispensable so far as the inhabitants are concerned, whether they are adults or children, then how can anybody rationalize the conversion of a pipeline.

I would say from the standpoint of expense—now I am not an engineer and I cannot speak as an expert in this matter of cost, but anyone in this room knows that the additional cost of a pipeline is tied in with its regular inspection and with its maintenance. That has never been, to my knowledge, explored as it must need be.

Then, summing it up, I am here to speak for the future of the people of south Florida. They are not here yet, they cannot speak for themselves. But to make a mistake of this magnitude and to

have future generations suffer and pay for it, I think that is what brought me here this morning. I cannot accept it. It is not the way things are done.

For the people who live in north Florida, and I am sure everyone here knows that we in south Florida have to take account of the people who make laws and things in north Florida. For them I will say this: that a good and viable environment is acceptable for a good economy. You do not have to find out the hard way if what I say here today is true.

The CHAIRMAN. Well, thank you, Ms. Frazier. We appreciate that.

This has been a very interesting hearing to me. I might mention that my own State is an energy producing State and so I do have some knowledge about these matters. I would like to see Florida have all the energy needs that it needs. It is a great State and very important to our Nation. I think this hearing has elucidated the issues and the problems. We have had good witnesses on both sides of the issue.

The one thing that this hearing identified are real problems here, and some real questions. I think the issue needs to be raised as you raised it, Ms. Frazier.

It is my understanding that the Department of Environmental Regulations here in Florida has no statutory approval process. They will simply record site lines, blueprints, and they will offer technical comments.

It needs to be pointed out that the Florida State Department of Environmental Regulations has no technical engineer to comment on this issue. They learned they have to hire, or they tried to hire a qualified engineer since 1983. Frankly, even if they do, there is nothing that says that they have a statutory approval process for this problem.

I am the last to want to cause any problems with regard to this installation of the pipeline. It might bring energy to Florida. I assure you I do not even know who the power company is. But I am concerned about one of a variety of interests here.

I am concerned about the issue of public health. I chair the largest authorizing committee in the U.S. Congress. Under the jurisdiction of the Senate Committee on Labor and Human Resource are approximately 3,000 Federal programs that Senator Hawkins and I overview.

I think some very important issues were raised here today, and I believe that the people of Florida should be concerned. These are real issues which involve public health, and which may involve the future of Florida, and the future of many generations, as was stated by Ms. Frazier.

I have to admit that the environmental leaders are very important to us. This is the first time I have heard testimony from the Audubon Society and from the Sierra Club like this.

Some of the most important testimony given here today was given by Federal representatives, Mr. Blume and Mr. Thomas. I do not think they can be ignored. They say that literally the State seems to be relying on the Federal Government, which does not have the resources to do this job, and which is not doing the job. In that regard, because we have one question about how many safety

inspectors they have, I will put in the record a letter from the National Transportation Safety Board, dated May 14, 1985, from Charles H. Benton, the Chief of the Hazardous Material and Pipeline Accident Division. One significant statement which I will reiterate is the Safety Board has only 2 pipeline accident investigators for the 2,600 pipelines in this country. You heard their testimony. They are relying on the Florida State Department of Environmental Regulations to see that this is done right. The State has just approved the appropriate program. We must follow through on some of these issues.

There have been some good issues raised on both sides of this controversy. The bottom line is this: What is in the best interests of the people of Florida? Not the people of Massachusetts or Utah, but the people in Florida.

I will let Senator Hawkins make a few remarks and then we will adjourn.

Senator HAWKINS. I appreciate the chairman coming to Florida to see for himself the problem we do have. I am sure that this will not be the last hearing that we have on this subject. We have raised a lot of important questions here that need answers.

Since none of us have seen the design for this pipeline yet, including the president of the company, I think we would have to reserve some judgment until we see the proper design. My concern is that it is 1986 or in 1987, and I believe we have a right to see the final design before we make comments with finality upon it, basically, on any impact upon the waterfall indeed for the entire State.

It is a fact where the route will run. I believe that is about all we know at this particular time in light of Mr. Dorris' statement. We do know that there is no method known yet to clean up soil products out of the aquifers, and that is also a fact for the record.

So, thank you, Mr. Chairman, for holding this hearing.

The CHAIRMAN. Thank you, Senator Hawkins.

[The following material was submitted for the record:]

National Transportation Safety Board
Washington, D.C. 20594

MAY 14 198

Ms. Jean Fitzgerald
Executive Director
Florida Alliance
P. O. Box 21751
Fort Lauderdale, FL 33335

Dear Ms. Fitzgerald:

Concerning your April 24, 1985, letter to the Department of Transportation concerning the March 25, 1985, natural gas explosion involving Florida Gas Transmission's pipeline, the National Transportation Safety Board is not investigating this accident. The Safety Board is mandated by the U.S. Congress to investigate all pipeline accidents wherein a death or substantial property damage results. Substantial property damage is considered as damage in excess of $500,000. Beyond this mandate, the Safety Board is empowered to investigate any hazardous gas or liquid pipeline it believes would aid in the identification of safety improvements.

The Safety Board has only two pipeline accident investigators. With the many accidents which occur annually, we must be highly selective in determining which ones we believe offer the greatest opportunity for identifying improvements which should be made by the pipeline industry. Of the approximate 2,000 accidents reported annually to the Department of Transportation, the Safety Board is able to investigate 25 to 30.

I was please to read in Mr. Fulton's response to you that his Department is investigating the accident. Moreover, I believe that you also will find that the Florida Public Service Commission also is investigating that accident. To determine that agency's actions, I suggest that you write to Mr. Ed Mills in Tallahassee, FL, or call Mr. Owen Bowser at that agency's Miami, FL, Office.

Sincerely,

Charles H. Batten

Charles H. Batten
Chief, Hazardous
Materials & Pipeline
Accident Division

BEFORE THE STATE OF FLORIDA
LAND AND WATER ADJUDICATORY COMMISSION

TRANSGULF PIPELINE COMPANY,	)	
	)	
Petitioner,	)	
	)	CASE NO. 79-1254
vs.	)	
	)	
BOARD OF COUNTY COMMISSIONERS OF GADSDEN COUNTY, FLORIDA,	)	
	)	
Respondent,	)	
	)	
and	)	
	)	
MIDWAY COMMUNITY COUNCIL, INC. and HENRY B. DOVER,	)	
	)	
Intervenors.	)	

FINAL ORDER

This matter came before the Florida Land and Water Adjudicatory Commission on January 21, 1986, in Tallahassee, Florida, for final decision on a proposed development of regional impact pursuant to Section 120.57(1)(b)9 and 380.07(3), (4), Florida Statutes, and Rules 27G-1.09, 27G-1.11, and 28-5.405(2), (3), Florida Administrative Code.

The parties were represented by:

For Petitioner Transgulf Pipeline Company:	Wade L. Hopping Gary P. Sams Peter C. Cunningham Steven A. Medina Hopping Boyd Green & Sams 420 First Florida Bank Bldg. Post Office Box 6526 Tallahassee, Florida 32314
For Respondent Board of County Commissioners:	Joann G. Slay Harnett, Curry & Slay Post Office Box 391 Quincy, Florida 32351
For Intervenor Henry B. Dover:	Kenneth G. Oertel Terry Cole Oertel & Hoffman 2700 Blair Stone Road Suite C Tallahassee, Florida 32301 and Sally Munroe 107 S. Bronough Street Tallahassee, Florida 32301

For Intervenor Midway Community Council, Inc.:

Marva Davis
229 East Washington Street
Quincy, Florida 32351

and

Sally Munroe
107 S. Bronough Street
Tallahassee, Florida 32301

Having considered the evidence of record, argument of counsel and interested persons, the Recommended Order of the Hearing Officer of the Division of Administrative Hearings, Department of Administration, dated November 12, 1985 (attached and incorportated as Appendix A), and the Intervenors' Exceptions to Hearing Officer's Recommended Order and Initial Brief filed on December 12, 1985, and being fully advised in the premises, it is:

ORDERED:

1. Rulings on each of the Intervenors' Exceptions to the Hearing Officer's Recommended Order filed on December 12, 1985, as required by Rule 28-5.405(3), Florida Administrative Code, are set forth below in the Commission's Response to Exceptions.

2. The Hearing Officer's Recommended Order dated November 12, 1985, including its Findings of Fact, Conclusions of Law, Recommendation and Conditions, is hereby adopted and incorporated by reference herein with the following changes:

(a) Intervenors' Exception 19 acknowledged the existence of a typographical error in Finding of Fact 48. Finding of Fact 48 is corrected to read:

> (48) Data gathered from test well-drilling experience at the Northwest Florida Management District site indicate that any drawdown resulting from pumping at Transgulf's Midway Terminal will be quite limited in duration and scope and will have no adverse impact on either quantity or quality of water available at the Water Management District or to residents of Lake Yvette. Nor will the installation of approximately 20 acres ~~available at the Water Management District or to residents~~ of impervious surface at the Midway terminal adversely affect local water supplies because (a) releases to swales will percolate; (b) 20 acres are only a small percentage of the surface area draining to the depression southwest of the site and an even smaller percentage of the Little River Basin; (c) the Transgulf site is not a recharge area for local residents who might have shallow wells; and (d) Dover's catfish ponds are located in a different drainage basin, with County Road 159 as the watershed divide.

(b) The Commission modifies condition 10 on page 41 of the Recommended Order in order to clarify that site acquisition within three years from the date of this Final Order, excluding time during any appeals or other contested judicial or administrative proceedings, is required for the permission to develop approved by this Final Order to take effect. This Final Order becomes effective immediately upon entry.

Condition 10 on page 41 is modified to read:

> (10) The permission to develop ~~approval~~ granted by this Final Order is expressly conditioned upon and is of no force or effect until such time as, ~~or at the end of three years from the date of the Final Order, whichever first occurs,~~ Transgulf acquires legal ownership of the proposed Midway terminal site; in addition, Transgulf must acquire ownership of the proposed Midway terminal site within three years from the date of this Final Order, excluding time during any appeals or other contested judicial or administrative proceedings, to render the permission to develop effective.

Exceptions to the Recommended Order by Intervenors, Midway Community Council, Inc, & Henry B. Dover

1. Intervenors' 1st exception is denied. The exception addresses an introductory matter which is not dispositive of any issue before the Commission. Moreover, the Hearing Officer accurately reflected the conduct of the hearing.

2. Intervenors' 2nd exception is denied. Section 120.57(1)(b)(9), Florida Statutes, governs an agency's scope of review of a Hearing Officer's findings of fact in a recommended order. Section 120.57(1)(b)(9), F.S., provides in pertinent part:

> [An Agency] may not reject or modify the findings of fact unless the agency first determines from a review of the complete record, and states with particularity in the order, that the findings of fact were not based upon competent substantial evidence or that the proceedings on which the findings were based did not comply with essential requirements of law.

This exception presents no basis for rejection or modification of a finding of fact.

3. Intervenors' 3rd exception is denied. The Hearing Officer's Order dated August 13, 1979 (attached and incorporated

as Exhibit B), reviewed by the First District Court of Appeal, correctly concluded that the timely filing of the notice of appeal by Petitioner with at least five of the seven members of the Commission was sufficient to satisfy Section 380.07(2), Florida Statutes.

Section 380.07(2) reads in pertinent part:

> Within 45 days after the [development] order is rendered, ...the developer... may appeal the order to the Florida Land and Water Adjudiciatory Commission by filing a notice of appeal with the Commission. (Emphasis supplied)

The remainder of the exception is immaterial and an improper characterization of the Recommended Order to the extent it implies the Hearing Officer addressed the public convenience and necessity of the entire pipeline project.

4. Intervenors' 4th exception is denied. The Finding of Fact is a factual recitation of relevant proceeding before the Federal Energy Regulatory Commission relating to the proposed Midway Terminal. The exception incorrectly characterizes the Recommended Order as giving F.E.R.C. staff conclusions res judicata effect.

5. Intervenors' 5th exception is denied. This exception is denied because the Hearing Officer's Finding of Fact was based upon competent substantial evidence. The second paragraph of the exception is an incorrect characterization of the Recommended Order, which did not rely on the detailed plans and designs of the Kissimmee Terminal.

6. The Intervenors' 6th exception is denied. The Finding of Fact was based on competent, substantial evidence. The Commission finds that estimated savings in transportation costs was relevant.

7. The Intervenors' 7th exception is denied. The Hearing Officer's finding that the conceptual design for the proposed Midway Terminal includes 17 storage tanks is based on competent substantial evidence.

8. The Findings of Fact in the Recommended Order were based on competent, substantial evidence, therefore,

exceptions 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18 to the Findings of Fact in the Recommended Order are rejected.

9. Intervenors' 19th exception, which acknowledges the existence of a typographical error in the Recommended Order's Finding of Fact 48, is granted. The Finding of Fact as corrected is supported by competent, substantial evidence.

10. Intervenors' exceptions 20, 21, 22, 23, 24, and 25 are denied. The Findings of Fact in the Recommended Order were based on competent, substantial evidence.

11. Intervenors' 26th exception that Transgulf lacks standing to file an application for development approval or to appeal the denial of the application by the County Commission is denied. Present ownership is not a requirement to apply for development of regional impact approval or to bring an appeal to the commission. Section 380.031(2), 380.07(2), Florida Statutes, see also Londono v. City of Alachua, 438 So.2d 91, 93 (Fla. 1st DCA 1983) ("The Owner of the lands for which development is sought by DRI application, and the developer, may be different persons...") Section 380.08, Florida Statutes, from which Intervenors infer a property ownership requirement was intended to protect applicants from unduly restrictive denials or conditions of permission to develop.

12. Intervenors' 27th exception alleging that Transgulf has not demonstrated that it had the potential to acquire the 51 acre tract and that Transgulf does not have the statutory authority to take the land through eminent domain is denied. The Florida eminent domain statute confers upon common carriers of petroleum products all rights of eminent domain for the purposes of "acquisition of rights-of-way fo the instaNlation, operation, maintenance, repair and replacement of its pipelines and all structures, pumping stations and other installations and works incident thereto." (Section 361.06 Fla. Stat.) (Emphasis added)

13. Intervenors' 28th exception is denied. In order to remove any ambiguity, the condition is appropriately reworded in the Final Order.

14. Intervenors' 29th exception is denied. This exception represents an incorrect characterization of the Recommended Order, which correctly held that authority to determine application sufficiency is given to the regional planning agency. Section 380.06(10), Florida Statutes (1985). The statutory scheme for DRI reviews, as set forth in Section 380.06, Florida Statutes, requires that the regional planning agency identify regional issues based upon enumerated criteria and make recommendations to local government.

15. Intervenors' 30th exception argues that the Hearing Officer erred when she concluded that the changes in Transgulf's projects were not "substantial deviations". Intervenors' 30th exception is denied on the ground that the "substantial deviation" provisions of Chapter 380.06(17) apply only to changes to a "previously approved" DRI, and not to an original application progressing through the review process.

16. Intervenors' 31st exception argues that Gadsden County's initial order denying Transgulf's ADA should not be set aside without proof by Transgulf of some overriding regional public interest or if some abuse of discretion can be demonstrated. Intervenors' 31st exception is denied. The Hearing Officer correctly found that in a Chapter 380 proceeding, no special weight attaches to Gadsden County's initial Order of Denial.

17. Intervenors' 32nd exception is denied. The Hearing Officer's conclusions concerning the safety and impact of the proposed project on the region are based upon competent, substantial evidence.

18. Intervenors' 33rd exception is denied. The Hearing Officer's determination that the proposed terminal will be compatible with the mixture of land uses that have developed

in the area surrounding the proposed site is based on competent, substantial evidence. Intervenors' further argue in exception 33 that Transgulf must prove that the proposed facility will produce substantial regional benefits in order to reverse the County's original decision. This point has been previously addressed in the response to Intervenors' 31st exception.

19. Intervenors' 34th exception is denied. The Hearing Officer in her Recommended Order has determined the conditions necessary for approval based upon competent substantial evidence adduced at hearing of Petitioner's design, construction and operation commitments, as set forth in Findings of Fact 21 through 41.

Done and Entered this 23rd day of January, 1986, in Tallahassee, Florida.

Glenn W. Robertson, Secretary
to the Florida Land and
Water Adjudicatory Commission

Copies to: Members of the Commission
Counsel of Record
Gadsden County Board of County Commissioners
Apalachee Regional Planning Council
Department of Community Affairs
Diane D. Tremor, Hearing Officer

STATE OF FLORIDA

Department of Administration

Division of Administrative Hearings
Oakland Building, 2009 Apalachee Parkway
TALLAHASSEE
32301

Sharyn L. Smith
[redacted]
Director

Bob Graham
Governor
Gilda H. Lambert
[redacted]
Secretary of Administration

November 12, 1985

Honorable Bob Graham
Governor
State of Florida
The Capitol
Tallahassee, Florida 32301

Honorable Jim Smith
Attorney General
State of Florida
The Capitol
Tallahassee, Florida 32301

Honorable Doyle Conner
Commissioner of Agriculture
The Capitol
Tallahassee, Florida 32301

Honorable Ralph Turlington
Commissioner of Education
The Capitol
Tallahassee, Florida 32301

Honorable George Firestone
Secretary of State
The Capitol
Tallahassee, Florida 32301

Honorable Bill Gunter
State Treasurer and Insurance
Commissioner
The Capitol
Tallahassee, Florida 32301

Honorable Gerald Lewis
Comptroller
State of Florida
The Capitol
Tallahassee, Florida 32301

Re: Transgulf Pipeline Company v. Board of County Commissioners of Gadsden County, Florida, and Midway Community Council, Inc. and Henry B. Dover
DOAH Case No. 79-1254

Dear Members of the Florida Land and Water Adjudicatory Commission:

Enclosed is my Recommended Order in the referenced proceeding. Under separate cover, I am forwarding the exhibits and the 21-volume transcript of the hearing to Mr. Glenn W. Robertson, Jr., Secretary of the Land and Water Adjudicatory Commission.

Copies of this letter will serve to notify all parties that my Recommended Order has been transmitted on this date. Pursuant to Section 120.57(1)(b)8, Florida Statutes, the parties are advised that they are allowed to file written exceptions thereto with the Florida Land and Water Adjudicatory Commission.

Please furnish the Division of Administrative Hearings with a copy of the Final Order rendered in this proceeding so that our files will be complete.

Sincerely,

Diane D. Tremor

Diane D. Tremor
Hearing Officer

DDT/lc

cc: Glenn W. Robertson, Jr.
Gary P. Sams, Esquire
Peter C. Cunningham, Esquire
Steven A. Medina, Esquire
Joann G. Slay, Esquire
Terry Cole, Esquire
Kenneth G. Oertel, Esquire
Sally G. Munroe
Marva A. Davis, Esquire

Copies to: A. D. Dorris
Ross Workman
W. M. Cauthen
C. G. Shamblee
R. W. Uteqaard
C. E. Cheek
R. Y. Patterson
Hal Scott
W. G. Janacek
L. B. Brashier

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

TRANSGULF PIPELINE COMPANY, Petitioner, v. BOARD OF COUNTY COMMISSIONERS OF GADSDEN COUNTY, FLORIDA, Respondent, and MIDWAY COMMUNITY COUNCIL, INC. and HENRY B. DOVER, Intervenors.	)	CASE NO. 79-1254

RECOMMENDED ORDER

Pursuant to notice, an administrative hearing was held before Diane D. Tremor, Hearing Officer with the Division of Administrative Hearings on May 28-31, June 3-7 and June 11-12, 1985, in Tallahassee, Florida. The issue for determination in this proceeding is whether the Governor and Cabinet, sitting as the Florida Land and Water Adjudicatory Commission, should grant (with any appropriate conditions and restrictions) or deny (with indication of any changes that would make the development proposal eligible for approval) Transgulf Pipeline Company permission to develop a liquid petroleum products storage and truck loading terminal near Midway, Gadsden County, Florida.

APPEARANCES

For Petitioner:
Gary P. Sams
Peter C. Cunningham
Steven A. Medina
Hopping Boyd Green & Sams
Post Office Box 6526
Tallahassee, Florida 32314

For Respondent:
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Harnett, Curry & Slay
Post Office Box 391
Quincy, Florida 32351

For Intervenor Dover: Terry Cole
Kenneth G. Oertel
2700 Blair Stone Road
Suite C
Tallahassee, Florida 32301

and

Sally G. Munroe
107 South Bronough Street
Tallahassee, Florida 32301

For Intervenor Midway: Marva A. Davis
229 East Washington Street
Quincy, Florida 32351

and

Sally G. Munroe
107 South Bronough Street
Tallahassee, Florida 32301

INTRODUCTION

Petitioner Transgulf Pipeline Company timely filed a petition and notice of appeal from the Board of County Commissioners of Gadsden County Order dated April 3, 1979 denying Transgulf's application for development approval of a liquid petroleum products storage and truck loading terminal to be located near Midway, Florida. After numerous judicial proceedings, this de novo final administrative hearing commenced on May 28, 1985.

In support of its position that it is entitled to approval of its proposed storage and truck loading facility, petitioner presented the testimony of Wiley M. Cauthen, petitioner's Vice-President of Engineering, Remission and Environmental Affairs; Robert F. Carroll, a member of the Board of Directors of the Lake Yvette Homeowners Association; Norman McMillan, Bureau Chief, Central Operations, Department of Revenue, and Charles Blume, the former Planning and Zoning Director of Gadsden County. Testifying as expert witnesses in petitioner's behalf were William Janacek, petroleum products pipeline and terminal engineering design, construction and operation; John S. Stanley, pipeline design engineering, construction and operation, including terminal facilities; Donald M. Johnson, fire protection engineering, specifically in regard to petroleum product facilities; James M. Thomas,

biology and Florida ecology; Marsha A. Chance, archaeology; Alan M. Schmook, personal lines property and casualty insurance underwriting; James W. Lee, transportation engineering and planning; Frank L. Cross, Jr., air pollution control engineering, air quality impact analysis, air quality monitoring and noise evaluation; James C. Nicholas, economics of growth management; C. W. Sheffield, surface water management and wastewater treatment engineering; Thomas Kwader, geology, hydrogeology and geophysics, including assessment of migration of contaminants in groundwater; Diane L. Jetton, real estate sales and valuation; and Earl M. Starnes, an expert in architecture, comprehensive planning and land use planning. On rebuttal, the petitioner presented the testimony of E. Dwayne Fortune; Bryant P. Marshall, accepted as an expert in geotechnical engineering; Frank David Stevens, accepted as an expert in hydrocarbon chemistry and the analysis and treatment of wastewater containing petroleum products; Donald M. Johnson; Ben Elinor and Wiley Cauthen. Received into evidence were petitioner's Exhibits 1-7, 10-32, 37, 38, 40, 42, 45, 49-60, 64-68, 70-78, 80-85, 87-113, and 115-124. Petitioner's post-hearing Motion for Official Recognition of the actions and records of judicial proceedings concerning this case and of the Department of Environmental Regulation's August 20, 1985 modification of the air source construction permit was granted.

The respondent Board of County Commissioners of Gadsden County offered no witnesses and no exhibits at the final administrative hearing.

Testifying on behalf of the intervenors Dover and Midway Community Council, Inc. were the following expert witnesses: Rodney Dehan, groundwater quality, chemistry, biochemistry and microbiology; Diana Sawaya-Crane, land planning as it relates to development of regional impact (DRI) review; Paul Gruber, organic chemical contamination movement, geology, and hydrogeology; Jack D. Riggenbach, industrial waste and wastewater treatment and chemical engineering; Huey Mangus,

petroleum firefighting and the prevention and control of fires at petroleum storage facilities, and in public safety to the limited extent that it involves protecting the public from fire hazards posed by petroleum products or a petroleum storage facility; Miles R. Bower, firefighting and fire control, petroleum firefighting and public safety; James William McCartney, land use planning; J. T. Williams, Jr., real estate development; and James May, land use, comprehensive planning and the DRI process. Also testifying on the intervenors' behalf were Watha Ard, Robert F. Carroll, Henry B. Dover, Charles D. DuPont, Claudette Cromartie, Robert E. Culbertson, William Augustus McGill, Emmanuel Gerald Kenon, Jimmie E. Cooper, Arthur Lawson, Sr., Frederick Jerome Young, Vivian Kelly, Queen Ford, Reverend C. J. Jones, and Walter O. Pettis. In addition, Dover called Paul Parks, an expert in pollution chemistry, as a rebuttal witness. Received into evidence were the intervenors' Exhibits 59-62, 80, 82, 83, 85, 92, 93, 116, 123, 125, 126, 137, 138, 143, 144, 148, 149, 168-170, 172, 176, 212, 213 and 215.

The parties' prehearing stipulation was received into evidence as Hearing Officer's Exhibit 1.

Subsequent to the hearing, counsel for the petitioner and for the intervenor Dover submitted proposed findings of fact and proposed conclusions of law. Neither the respondent Gadsden County nor the intervenor Midway Community Council submitted post-hearing memoranda or proposed findings of fact. The proposed factual findings submitted have been carefully considered and, except as noted in the Appendix to this Recommended Order, have been accepted.

FINDINGS OF FACT

Upon consideration of the oral and documentary evidence adduced at the hearing, the following relevant facts are found:

The Application Process

(1) On or about November 1, 1978, petitioner Transgulf Pipeline Company (Transgulf) filed with the respondent Board of

County Commissioners of Gadsden County, Florida (Gadsden County) an application for development approval (ADA) of a proposed liquid petroleum products storage and truck loading terminal to be located near Midway, Gadsden County, Florida (Midway Terminal). Copies of the ADA were provided to the Apalachee Regional Planning Council (ARPC) and the Division of State Planning. The ARPC requested additional information about the project from Transgulf on or about December 12, 1978, Transgulf supplied the additional information to the ARPC, and the ARPC informed Gadsden County on or about December 18, 1978 that Transgulf had supplied the additional information requested and that Gadsden County could advertise for a public hearing on the Midway Terminal ADA.

(2) The Gadsden County Planning and Zoning Commission voted to recommend approval of the Midway Terminal proposal to Gadsden County on February 27, 1979.

(3) On or about March 2, 1979, the ARPC submitted an analysis of the Midway Terminal and recommended approval of the development with three conditions: improvements to County Road 159, a buffer between the storage facility and existing residences in the area and adequate fire fighting facilities on the site. In addition, the ARPC noted that the proposed project site was unzoned and that

> "Therefore, the County Commissioners must consider in evaluating this project how it would like for Gadsden County to grow. Should the area be set aside for residential growth, commercial growth, or left in its existing state? The answer to this question is a growth policy that the County Commissioners must decide." (Petitioner's Exhibit 7)

(4) On March 13, 1979, Gadsden County conducted a public hearing and voted to deny development approval. A written Development of Regional Impact Order denying development approval was issued on or about April 3, 1979. The Order concluded:

> "1. This DRI would have an unfavorable impact on the environment and the natural resources of the region involved.
>
> 2. This DRI would have an unfavorable impact on the economy of the region involved.

3. This DRI would unduly burden the public transportation facilities in the region involved."

The Order further listed the following as changes which would make "this DRI . . . eligible to receive a permit":

"1. Location of this DRI in an area that is not prime residential and densely populated.

2. Location in an area where in the event of a catastrophe such as fire or explosion that such fire or explosion will not result in an adverse effect upon the environment of the area.

3. Location of this DRI in an area where its presence will not create an adverse effect upon the economy of the region.

4. Adequate provisions must be made for traffic safety in handling the large number of semi-tractor tankers that will use this facility to the end that no traffic hazards are created and that transportation facilities are not unduly burdened." (Petitioner's Exhibit 32)

In addition, the County found the ARPC's report and recommendation to be incomplete and concluded that the "Midway, Florida, area is predominantly rural residential in nature and affords a quiet community for peaceful living."

(5) Transgulf timely filed a petition and notice of appeal from Gadsden County's denial to the Florida Land and Water Adjudicatory Commission. Between that time and the time of the commencement of the instant administrative hearing, numerous judicial and other administrative proceedings have occurred. As relevant to the issues for determination in this proceeding, the Federal Energy Regulatory Commission (FERC) issued a certificate of public convenience and necessity for the entire pipeline project and, as a part of its review, considered potential alternative sites for the subject storage facility. The FERC staff concluded that

"[T]he Midway site would not create unacceptable impact. Further, no other site studied by the staff would constitute a superior alternative to the proposed Midway site." (Petitioner's Exhibit 11, page 130)

(6) The conceptual design and impact information contained in the petitioner's original ADA is basically unchanged. However, due to the passage of time pending this appeal, Transgulf has refined and updated certain information concerning the project in light of regulatory, technological and industry changes and advances; FERC and ARPC conditions; concerns expressed by interested persons and the detailed planning and designing of a larger, but similar storage facility to be located near Kissimmee, Florida, which facility has now received DRI approval. The final design plans for the proposed Midway terminal will cost approximately $1 million.

Overview of the Proposed Project

(7) Florida Gas Transmission Company is the owner and operator of a dual pipeline system extending approximately from Baton Rouge, Louisiana to Fort Lauderdale, Florida. Florida Gas Transmission Company and Transgulf Pipeline Company are wholly owned subsidiaries of Houston Natural Gas Company. Transgulf is in the process of acquiring from Florida Gas Transmission Company one of the pipelines presently being used to transport natural gas, and plans to use this pipeline to transport refined liquid petroleum products, such as gasolines, diesel fuel, home heating oils and aviation jet fuels. Transgulf's liquid petroleum products pipeline will receive products from a refinery and existing pipelines near Baton Rouge, Louisiana and from a pipeline at Lucedale, Mississippi. These products will be delivered to the State of Florida through existing terminals at Jacksonville and Port Everglades and through terminals Transgulf plans to construct near Midway in Gadsden County, Florida and Kissimmee in Osceola County, Florida. At these terminals, products will be delivered into individual tanks assigned for each product and loaded from the tanks into trucks for distribution in the market area. The overall cost of the total pipeline project is approximately $500 million. It is estimated that the pipeline project as a whole will result in savings in transportation costs of approximately $1.5 billion over the first 20 years of its life.

(8) The proposed Midway Terminal will serve a market area consisting of all or a portion of Jackson, Liberty, Franklin, Wakulla, Gadsden, Leon, Jefferson, Madison, Taylor, 000000Lafayette, Hamilton and Dixie Counties. The existing distribution system for liquid petroleum products in this market area is by truck from terminals in Panama City, Florida; Bainbridge, Georgia; Jacksonville, Florida; and St. Marks, Florida.

(9) The proposed Midway terminal will include seventeen above-ground petroleum storage tanks with an ultimate capacity of approximately 350,000 barrels of petroleum product. This is approximately 4.3% of the total pipeline capacity. The terminal's existence is not an essential element of the pipeline conversion project. As more particularly described below, the conceptual design for the proposed Midway terminal includes, in addition to the 17 storage tanks, loading bays to service approximately 75 trucks per day, a vapor recovery system, a water treatment system, dikes, retention ponds and settling ponds lined with impervious liners, a manifold area, a driveway, a small office building, security and lighting, an automatic self-contained fire detection and preventive system and a high-level communications system.

The Intervenors

(10) Henry Baker Dover and his wife own and reside on approximately 344 acres of land located in Midway on the eastern side of County Road 159, north of its intersection with U.S. 90. Also on the property are two mobile homes and a house occupied by his two sons and their families, along with another individual. Mr. Dover operates a channel catfish hatchery on this property. The catfish are grown in 32 different ponds located on the property, containing some 135 surface acres of water, and are sold as stock to numerous pond owners throughout Florida and South Georgia. A large portion of Mr. Dover's original acreage was sold (with the retention of a reverter interest) to a Fuller's earth mining company, and many of his ponds were created

from stripped off overburden in connection with the mining activities. There is also an 18-acre spring-fed lake on this property. When mining is conducted on the property, the activity involves three to six trucks making three to four trips per day. Mining activities were conducted on the mining company property for approximately 30 to 35 days in 1984, although for several previous years mining was not conducted.

(11) The Midway Community Council, Inc. is a nonprofit corporation composed of residents and other persons who have property interests or other community ties to the Midway, Florida area. It was formed in 1978 or 1979 and incorporated in May, 1979. A substantial number of Midway members either reside or own property on County Road 159, St. John's Church Road, Dupont Road or U.S. 90 in the Midway area, attend church in the Midway area, and/or have children who are transported by public school bus on County Road 159 to Havana, Florida. Among the purposes of the Council is to promote the improvement of the community by engaging in activities for improving the general welfare, health, safety, industrial, economic, social and cultural conditions of the community.

The Site and Vicinity

(12) The proposed terminal site is presently owned by the heirs of Ida Munroe, deceased. In 1979 Transgulf had an option to purchase the property. However, that option lapsed and Transgulf currently has no ownership interest in or option to purchase the property. Title to the property is clouded due to the number of heirs in the estate. Transgulf intends to acquire the site through negotiation with the heirs or, if necessary, through what is anticipated to be a "friendly" eminent domain proceeding. Transgulf has communicated with the senior member of the Munroe family over the years and as recently as the week prior to the hearing.

(13) The proposed site for Transgulf's Midway Terminal is comprised of approximately 51 acres of land adjacent to the pipeline on the west side of County Road 159, approximately 7/10

of a mile north of the intersection of U.S. 90 and County Road 159. The terminal would be located approximately 10 1/2 miles east of Quincy, Florida, approximately 12 1/2 miles west of Tallahassee, and approximately 1 1/2 miles north of the community of Midway, which is normally shown on maps as located south of U.S. 90 and Interstate 10.

(14) The intersection of County Road 159 and U.S. 90 is approximately 2.2. miles northwest of the intersection of U.S. 90 (a four-lane divided highway connecting Quincy and Tallahassee) and Interstate 10 (a limited access highway). Between these two intersections are several commercial establishments, both large and small, including a night club, marine and tractor equipment facilities, a paint and body shop, an auto salvage and service yard, and scattered lower-priced residences. On the south side of U.S. 90 at its intersection with County road 268, which is effectively the southerly extension of County Road 159, is the 28-acre Midway Industrial Park. The industrial park houses facilities for producing manufactured homes, fabricating security systems and bars, storing electronic and sporting equipment, conducting sales, and a variety of other activities, with a total employment of about 100 persons. Interstate 10 lies between the industrial park and the Midway Community to the south.

(15) The Midway Terminal driveway will be located just south of the entrance of St. Johns Church Road onto County Road 159 and just north of the property of Orval Pettis, who both resides and conducts a small used automobile storage, sales and repair operation at his property. Approximately 17 homes are located on St. Johns Church Road, which is an unpaved dead-end road running north of the site. Two churches, one built almost 100 years ago, are also located northeast of the terminal site. To the east of the proposed terminal tract are two or three cemetery sites, one of which may qualify for placement in the National Register of Historic Places. The Northwest Florida Water Management District offices are located on U.S. 90

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southwest of the site, and the Lake Yvette subdivision with approximately 27 homes and 85 lots, is located to the northwest of the site. The terminal site is not visible from homes in Lake Yvette, and residents of Lake Yvette enter their subdivision from U.S. 90 at a point some distance northwest of County Road 159. In general, the unzoned area within one mile of the proposed terminal site is rural in character, but contains a scattered mixture of industrial, institutional, forestry, agricultural, mining and residential uses.

(16) After reviewing about twenty other alternative sites in four different counties, Transgulf chose the subject site based upon considerations of environmental sensitivity, development patterns, traffic, market access, soil suitability and local land use regulations. The Midway site was determined to be superior to all other sites.

(17) Gadsden County has no zoning ordinance or future land use map or code applicable to the Midway area or the proposed terminal site. The Gadsden County Comprehensive Plan is one of policy and is not site-specific. The review of commercial and industrial proposals are done on a site-specific basis. Among the elements contained in the 1981 Gadsden County Comprehensive Plan are the clustering of commerce along existing communities and the four interchanges along Interstate 10, and the appropriation of at least 25 acres for industry. To this extent, the location of the terminal at the Midway site is consistent with the County's Comprehensive Plan.

(18) While the property immediately along County Road 159 is also suitable for residential development, there is presently a mixture of commercial, industrial, residential and other uses in the vicinity. Real estate in the area has a higher value per acre for commercial or industrial use than for residential use. While residential values of property immediately surrounding the site may suffer some decline, residential growth and values should not be affected beyond a quarter or half mile from the site if proper buffering and safety precautions are provided.

(19) It is possible that the Midway area, particularly along County Road 159, might in the future be the location of anticipated growth spilling over from the Tallahassee area. However, this is somewhat conjectural and the likelihood of higher-priced homes in that area would be somewhat inconsistent with the industrial, commercial and mining uses already in existence in the general vicinity.

(20) There are no basic inconsistencies between the Midway Terminal proposal and the general policies embodied in the State Comprehensive Plan.

Design and Operation of Proposed Terminal

(21) The Midway Terminal will be designed to comply with or exceed all applicable federal, state, regional and local regulatory requirements and permitting programs, and national industry design codes and standards. Because the terminal, as well as the pipeline project as a whole, is capital intensive, involves multi-million dollar investments, and will handle valuable products, Transgulf feels that it has a natural incentive to design, construct, operate and maintain the Midway Terminal in an efficient, effective and reliable manner, using state-of-the art technology.

(22) In comparison to other petroleum terminal facilities, the proposed Midway facility will be relatively small. Its capacity of 350,000 barrels of petroleum products will be stored in 17 above-ground tanks, the largest of which will hold about 40,000 barrels. The terminal will have a daily loading capacity of approximately 15,000 barrels and no more than 8 truck loading bays. The facility will load approximately 75 trucks per day and be available for operation on a 24-hour per day, seven day per week basis, although actual truck loading will occur sporadically.

(23) The Midway Terminal, like the pipeline system as a whole, will be highly automated. Terminal and pipeline operations will be continuously monitored by a central operator from Transgulf's Central Florida Control Center in Winter Park,

Florida, through a redundant supervisory control and data acquisition (SCADA) system. Communication between the Central Florida Control Center and the Midway Terminal will occur via a privately owned satellite system (for computer and voice communications) with a back-up dial-up system (for computer and voice communication) and an additional back-up V.H.F. radio system (for voice communication). At the Midway Terminal location, a local computer system will control safety and operational functions through a programmable logic controller with standby mini-processor and will also control truck loading operations, billing and tank inventories through a local processing unit. A non-interruptible battery power supply will be installed to provide control power and lighting in the event of a general power failure. The estimated costs of the SCADA and communications systems are $6 million and $2.5 million respectively.

(24) In addition to the automated systems and the central operator, the facility will be manned during normal working hours, 8:00 a.m. to 5:00 p.m., five days a week, by a supervisor and two utility personnel. Also, one or more truck drivers will be on site during truck loading operations. Each employee will be trained in the operations, maintenance and safety equipment of the facility. All three employees will be required to live within 15 minutes of the Midway Terminal, and one such employee will be on call on evening and weekend periods. Personnel assigned to the Midway Terminal and other facilities will be subject to call-out duty whenever circumstances require.

(25) Petroleum products will travel through the pipeline in fungible or segregated batches at a maximum velocity of approximately 7 miles per hour. It will take a minimum-sized batch of 50,000 barrels approximately 3 1/2 half hours to pass the Midway Terminal. The batches will not be physically separated and some mixture, or "interface," of products will occur within the pipeline. By using fluorimeter, densitomer and metering techniques, Transgulf will be able to track the progress

of batches traveling through the pipeline and take off desired quantities of unmixed product at the Midway Terminal, thus avoiding any need for handling product interface at the Midway Terminal.

(26) Product will enter the Midway Terminal through a locally computer-controlled draw valve where the product will be automatically sampled. The draw valve will have a back-up power source to allow closing in the event primary electrical power is lost. The product will then flow consecutively through a control valve, which will regulate pressure and flow conditions; a turbine meter facility, a meter prover equipped with a pulse counter and pressure and temperature transmitters; and finally, a manifold area, which will include a separate pipe header for gasoline and distillate, where product will be directed into the appropriate tank. A surge pressure relief system will automatically prevent pipe from becoming overpressured.

(27) The facility will use steel welded piping for transporting petroleum products. It will be designed in accordance with the regulations of the Federal Department of Transportation and State Fire Marshal and national industry standards, including American National Standards Institute/American Society of Mechanical Engineers Standard for pressure piping. The terminal will be designed for operation at less than twenty percent of the specified minimum yield strength of the pipe. Below-ground piping will be used except at the manifold area, at the entry point to the tanks, and at the loading area. The below-ground piping will be externally coated and cathodically protected against corrosion.

(28) Gasoline-type products will be stored in tanks with sealed internal floating decks and fixed external roofs. The external roofs will be either steel cone or geodesic dome roofs. Oil or distillate-type products will be stored in fixed roof tanks. Tanks will be designed and constructed according to Federal Department of Transportation and State Fire Marshal regulations, and national industry standards including American

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Petroleum Institute Standard 650 ("Welded Steel Tanks for Oil Storage"). Tank exteriors will be painted, and tank bottoms will have an additional internal coating to a height of at least eighteen inches, along with cathodic protection against corrosion. To provide initial settlement and to confirm that each tank is properly constructed and does not leak, the following tests will be conducted before filling with product: (a) each tank will by hydrostatically tested through filling with water, a liquid heavier than any petroleum product to be stored; (b) external welds in the tank shell will be x-rayed to detect any flaws; and (c) each tank bottom will be vacuum tested. Tanks will be constructed on concrete ring wall foundations, which will surround a pad comprised of layers of asphaltic sand and clean structural sand. Also underlying the tanks will be an impervious layer of bentonite clay material, used in lieu of a liner in order to allow for cathodic protection of the tank bottoms.

(29) The tanks will be placed within diked areas capable of holding the volume of the largest tank within the impoundment plus the volume of water resulting from a three-day, 25-year storm. Should some of the tanks be grouped in a common diked area, individual tanks will be separated by intermediate dikes. The diked areas, other than under the tanks, will have an impervious high density polyethylene (HDPE) liner battened to the concrete tank foundations, and special liner boots will be used where piping protrudes through the liner. The tanks will be spaced at or in excess of the distances required under National Fire Protection Association (NFPA) Standard 30 and at least one tank diameter from the inside edge of the vegetated buffer area which will extend on Transgulf's property around the site perimeter. The diked areas will be slightly graded so that any water or product outside a tank will flow away from the tank toward an environmental tank dike drain. The diked areas surrounding the tanks will also be used to contain tank overfills or spills, should they occur.

(30) Small quantities of water may be in the petroleum products when they arrive at the Midway Terminal. Due to the tank designs and the fact that water will be removed from the products at other upstream pipeline facilities, it is estimated that only 1,000 barrels of water per calendar quarter for the total facility will be in the products stored at Midway. Any water in a tank may be visually observed through a water level sight glass and periodically drained by manual valve from the tank (which operates as an initial oil-water separator), into a second oil-water separator outside the tank known as the environmental tank drain. Following a second visual observation of the environmental tank drain and the removal of any hydrocarbon sheen, water will be released from the environmental tank drain to the floor of the diked area. Any free product or hydrocarbon sheen observed on the surface of the diked area will be removed using absorbent material, vacuum pump or similar method. Further testing could be performed to detect the presence of hydrocarbons. While in the diked area, water will have the opportunity to evaporate and organic compounds which may have solubilized in the water will be allowed to volatilize below the level of detection. At the environmental tank dike drain any hydrocarbon sheen will be removed from the water prior to release of water to a grass drain swale on Transgulf's property outside the diked areas. Transgulf has committed to hold any water drawn from the tank bottoms within the diked areas for a minimum retention period of seven days prior to release through the environmental tank dike drain. This is an adequate period of time for any dissolved organic compounds to be removed through evaporation prior to discharge from the diked area.

(31) One major cause of fire at petroleum terminal facilities is a tank overfill. The following features will be installed at the Midway Terminal to prevent tank overfill: (a) a gauging and meter reading system with continuous read-out that automatically closes the draw valve from the pipeline and termintes delivery once the desired quantity is placed in the

tank; (b) as a back-up to the gauging and meter reading system, each tank will have a high level alarm which alarms locally and at the Central Florida Control Center to indicate normal fill level has been reached; (c) each tank will also have a high-high level detection alarm and shutdown system that automatically will close the draw valve and terminate delivery if no action is taken after the high level alarm is triggered; and (d) each tank will have a second high-high level detection alarm and system that will activate automatic shutdown independently from the other high-high level detection and alarm system. In addition, tanks will have hood deflectors rather than open screened vent outlets to prevent spraying of product should an overfill occur. Finally, combustible gas monitors will be available for use at the tanks to detect vapors from any product present in the diked areas due to an overfill.

(32) The Midway Terminal will have a self-contained system for fighting tank fires. Each tank will have automatic fire detection sensors and an automatic fixed foam system that is mounted on the tank shell and designed for full surface involvement to handle any situation where an internal deck is damaged or sunk. The automatic foam system will be locally computer controlled, not remotely controlled, and not dependent on action at the Central Florida Control Center. The fixed foam system at each tank will be connected to a central foam proportioning unit. The Midway Terminal will have 1,000 gallons of foam on-site for initial use. In addition, at least 3,000 additional gallons will normally be kept on-site because the Midway Terminal, due to its central location, will hold foam reserve for the terminals Transgulf is constructing near Lucedale, Mississippi and Kissimmee, Florida, as well as for the Midway Terminal. As a further back-up to the automatic firefighting system at the tanks, the manifold area at the Midway Terminal will be equipped with portable, mobile foam cannons sized to the tanks that will be at the facility, along with additional hoses with foam nozzles.

(33) In the event of a tank fire, a local alarm will be enunciated at the Midway Terminal control room and a remote alarm will be transmitted to the Central Florida Control Center operator. As an additional firefighting technique, local personnel or the Central Florida operator will be able to initiate a preprogrammed pumping out of the contents of the affected tank into another tank or into the pipeline using the reinjection pump that will be located at the Midway Terminal. The largest tank, when full, could be emptied in a maximum of eight hours.

(34) The principal source of any water for use at the terminal in proportioning foam, cooling tanks, or for other firefighting purposes will be the facility's retention pond. Transgulf will maintain the water supply in the retention pond to provide at least the quantity of water required for foam proportioning purposes under NFPA Standard 11, plus the amount that might be used for tank cooling purposes during an eight-hour tank fire. This translates to at least one million gallons of water in the retention pond for firefighting purposes. The retention pond will also be sized to contain a one in ten year storm, which is estimated to require approximately 0.7 million additional gallons, for a total retention pond capacity of at least 1.7 million gallons. It is estimated that the retention pond will be approximately five feet deep with a surface area of approximately 1.2 to 1.5 acres. Discharges from the pond will occur on an infrequent basis of about four or five times per year, at most, and the discharge will be from a point at least 50 feet within the site boundaries to a drainage swale. While Transgulf does not intend to rely on other sources of water, additional supplies could be obtained from fire trucks, the facility's well, and possibly from the local water main system which is expected to extend north of U.S. 90 on County Road 159. The well at the Midway Terminal will normally have a pump with a 35 to 40 gallon per minute (g.p.m.) capacity, but in an emergency, a 100 g.p.m. pump like that which will be used in the

initial filling of the retention pond could be utilized. It is estimated that it would take approximately 10-11 days to fill the retention pond with 1.7 million gallons of water using a 100 g.p.m. pump.

(35) The water supply will be distributed using a buried and constantly pressurized water main and hydrant system and arranged to provide full coverage at the facility including all tank surfaces and the loading and manifold areas. Two fire water pumps will be installed with 100% redundant capacity and separate power sources. Mounted or portable water spray monitors will be provided for tank cooling purposes. In addition, hose reels, spare hoses, nozzles, and a small hose house will be maintained on-site.

(36) The Midway Terminal will have limited access from County Road 159 and security lighting and fencing. Entry into the facility will require a computer-read driver identification card. Drivers will be trained in facility operations, rules and emergency procedures prior to obtaining authorization to use the facility. Each truck will receive an annual governmental safety inspection from the Florida Department of Agriculture, an annual vapor tightness test required under 40 CFR Part 60, Subpart XX Section 60.505, and an annual Transgulf inspection to assure compatibility with Midway Terminal requirements, such as brake interlocks.

(37) As with many modern terminal facilities in the United States, the truck loading process at the Midway Terminal will be computer-controlled and driver-operated. In order to load, the driver will be required to undertake several precautionary steps and activities. The truck engine, ignition switch and all electrical equipment, such as lights and radios, must be shut off; the truck must be visually inspected; and grounding, brake-interlocking, vapor recovery, overfill prevention, and bottom loading connections must be made and checked. Product loading, which is initiated by a start button, cannot commence until all safety connections are made and the

desired product volume is verified by the computer and pre-set into the meter. The meter will have an automatic set stop counter to shut down the pump and close the valves when the volume is received. Overfill will also be prevented by a high level device, either float-type or optical, which will automatically disengage the electrical connection and shut down the pump, and by a flow connection to the vapor recovery system where a flow switch also will actuate automatic shutdown. Leak of product will be further avoided through the use of dry-break coupling connections for the vapor recovery and product loading hoses, preventing the connections from being disengaged unless loading valves are closed. In addition, a grounding detector will discontinue loading if the grounding cable is disconnected. Bottom-loading of the trucks will provide a completely closed product loading system to allow vapors to be collected through a vapor recovery system that will be installed at the loading area. The precise system to be utilized has not yet been selected. After the loading operation is complete and the various connections are disengaged, a truck will be driven toward the exit gate where the driver will receive a computer printout designating the amount of product received. It is anticipated that a truck will typically be at the terminal for approximately 25-30 minutes.

(38) Like the tanks, the truck loading area will have an automatic fire protection system. Each loading bay will be equipped with a combustible gas monitor which will activate an alarm and automatically close down operations if any significant amount of combustible gas is detected. Each bay will also have a system of fire detectors that will trigger automatic injection of dry chemical or foam from the top and the base of the bay if a flame is detected and that will initiate a local alarm and an alarm at the Central Florida Control Center. If a fire occurs at the rack, the system will automatically stop all loading pumps and close all valves. Portable fire extinguishers, fire blankets, large two-wheeled extinguishers and hose reels will

also be provided at the loading area, as well as manual emergency shut-down switches, an emergency shower and an eye wash sink.

(39) The loading area will be canopied, paved in concrete and curbed to drain into a water separation system similar in principle to the system that will be installed for tank bottom water separation. The manifold area, which will have an underlying layer of bentonite clay material, will also drain into this system. The system will have three separate water separation phases. It will consist of an oil/water separator sized to contain the contents of one tank truck, followed by a settling pond, which will in turn be followed by the retention pond that will contain water for firefighting purposes. Each phase will be connected by hard pipe and will be designed so that any floating hydrocarbons are trapped and will not flow with the effluent water to the next phase or to the drain swale. Like the diked areas, settling and retention ponds will be imperviously lined with HDPE. Any hydrocarbon sheen on the settling and retention ponds will be removed as needed by absorbents, pumping or a similar method.

(40) The Midway Terminal will have a small office building to house the local computer system, laboratory equipment, restrooms and other miscellaneous facilities. The terminal will require a small septic tank and drainfield that must be approved by the Gadsden County Health Department. The terminal will also have a well approximately six inches in diameter for routine use at the facility and the initial filling of the retention pond.

(41) Geotechnical analysis of blow counts and split spoon soil samples obtained during the boring of 4 wells at the proposed facility site, together with related information, indicates that the soils are very strong and dense with low plasticity, to a depth of at least 40 feet and, accordingly, well-suited to the construction of the proposed facility using standard foundation construction. Additional soil sampling will be performed prior to actual construction and less suitable soils, if found, can be replaced.

Environmental Concerns

(42) The proposed Midway Terminal site is not located in any area of critical state concern and has no wetlands or other areas of unusual environmental sensitivity. The proposed site does not lie in a flood-prone area. The property has little off-site surface water flow, due to excellent percolation in the upper soil layers. A depression beginning approximately fifty yards south of the southwest corner of the proposed site connects to an intermittent creek that carries any off-site surficial flow under U.S. 90 approximately 1/4 mile south of the site, then into Munroe Creek which flows from Lake Yvette. After approximately three miles, Munroe Creek discharges into the Little River, which after approximately three more miles flows into Lake Talquin.

(43) During construction, any exposed soils will be watered as necessary to minimize dust. Temporary dikes or berms using hay bales or other materials will be used as needed to filter any silted water prior to installment of the drainage system. Following construction of the Midway Terminal, surface water discharge offsite is not expected to exceed preconstruction levels. Under the conceptual plan for the Midway Terminal, approximately 39 percent of the facility site will be impervious. However, natural drainage patterns will be retained in unaltered areas, and any flow from altered areas will be allowed to sheet flow and percolate back into the ground in the swale and buffer areas. The redundant systems for oil-water separation, physical removal and containment with infrequent releases are reasonably predicted to meet the criterion of 5 parts per million of oils and greases prior to discharge from a tank dike drain or the retention pond. Given the holding time of at least seven days in tank diked areas, the low frequency of annual release from the lined retention pond, and the considerable surface areas provided by these systems, dissolved organic compounds such as benzene, xylene, toluene, and EDB, which are quite volatile, are reasonably expected based on relevant experience in other facilities to be found in concentrations approximating the level

of detection or less prior to discharge. These are conservative analyses because they assume that the applicable State standards of 5 ppm for oils and greases (surface water), 1 ppb for benzene (drinking water), and .02 ppb for EDB (drinking water) apply at the point of release, not after a mixing zone within surface waters or after a zone of discharge with groundwaters. They are also conservative with respect to volatilization of organic hydrocarbons because volatilization would be faster under conditions of heavy rainfall, warmer temperatures, or high winds.

(44) Transgulf has committed to installing a groundwater monitoring system. A monitoring well system will be designed in accordance with state and federal regulations and tailored to the site so that wells will be placed in close proximity to potential source areas at multiple depths, and covering all boundaries of the site, including up gradient.

(45) The impermeable HDPE liners in tank diked areas and settling and retention ponds, along with concrete at the loading area, and bentonite clay under the tanks and at the manifold area will provide significant safeguards against groundwater contamination from routine water release, accidental spill or leak. If contaminated wastewater were released or if an accidental spill or leak were to occur in an unlined area, there is little likelihood of an adverse impact to any significant groundwater resource because of natural geological conditions at the proposed site. The Midway Terminal site lies over a layer of low permeability Fullers earth type clay ranging in thickness from approximately 16 to 30 feet and beginning at approximately 30 to 65 feet below land surface. Above the Fullers earth lies a highly localized shallow aquifer and below lies the low yielding Hawthorn carbonate aquifer which rests on a layer of low permeability Hawthorn confining material approximately 90 feet thick. The Floridan aquifer, the only regionally important aquifer underlying the site, lies below the Fullers earth and Hawthorne confining layers beginning at a depth of approximately 200 feet and continuing to a depth of

approximately 350 feet. If a considerable amount of petroleum product were released onto a pervious surface at the site, contact with even the initial Fullers earth confining layer would be unlikely because the product would tend to float in an effectively quiescent stage atop the slow moving surficial aquifer, where dilution, volatilization, absorption and biodegration would occur. Nevertheless, assuming pure gasoline came in contact with Fullers earth, due to the confining Fullers earth and Hawthorn formations, it would take on the order of 1,000 years for any hydrocarbon to reach the Floridan aquifer, and dilution alone would reduce benzene to levels at least 100 times below the groundwater standards of one ppb.

(46) Transgulf's plans for a monitoring well system designed to provide early leak detection would allow remedial steps to be taken before the occurrence of any off-site impact. In addition, an appreciable clay content of the soil below a depth of approximately 5 feet would delay wastewater from reaching the surficial water table at a depth of approximately 10 feet and allow natural mitigation.

(47) All site-specific evidence indicates that surface water and groundwater flows at the proposed terminal site are toward the west and southwest, away from the Dover catfish ponds to the east and southeast, residences and churches to the north and Lake Yvette to the northwest. Surface water and shallow groundwater flowing from the terminal site to the west and southwest would be intercepted by the existing natural depression in that area and drain away from the Northwest Florida Water Management District facilities in a south and southwesterly direction to the intermittent creek.

(48) Data gathered from test well-drilling experience at the Northwest Florida Management District site indicate that any drawdown resulting from pumping at Transgulf's Midway Terminal will be quite limited in duration and scope and will have no adverse impact on either quantity or quality of water Lake Yvette. Nor will the installation of approximately 20 acres

available at the Water Management District or to residents of of impervious surface at the Midway terminal adversely affect local water supplies because (a) releases to swales will percolate; (b) 20 acres are only a small percentage of the surface area draining to the depression southwest of the site and an even smaller percentage of the Little River basin; (c) the Transgulf site is not a recharge area for local residents who might have shallow wells; and (d) Dover's catfish ponds are located in a different drainage basin, with County Road 159 as the watershed divide.

(49) The Florida Department of Environmental Regulation (DER) has issued Transgulf an air permit authorizing construction of the Midway Terminal. In its most recent extension of the permit to July 1, 1988, the DER required Transgulf to submit, at least 30 days prior to the start of construction, its plans specifications and calculations for the pollution control equipment selected for the truck loading facilities to demonstrate that applicable emission standards will be met. The Midway Terminal is not required to obtain a federal air quality permit because it will have less than 100 tons per year in hydrocarbon emissions and is therefore classified as a "minor source" under Environmental Protection Agency (EPA) regulations.

(50) Steps taken by Transgulf to minimize air quality impacts include the fixed roofs on all tanks and sealed internal floating decks on tanks holding volatile materials. These devices will prevent wind shears and the forming of vapors. The vapor recovery system selected for use at the truck loading racks will be designed to meet applicable federal emission standards.

(51) Due to the more central location of the Midway Terminal to the market area, emissions of hydrocarbons, carbon monoxide and nitrous oxides from trucks transporting petroleum products is predicted to be reduced. The Midway Terminal truck traffic emissions will amount to less than 1% of the projected background traffic emissions in the area.

(52) The terminal and associated trucks will result in a total of approximately 57 tons per year in emissions of volatile organic compounds (VOC). Approximately 54 tons per year would be attributable to the tanks and the loading racks, with fugitive emissions accounting for approximately 2.21 tons per year and trucks resulting in approximately one ton per year. This corresponds to the VOC emissions that would naturally result from approximately 1,149 acres of pine trees or 352 acres of oak trees. Local air quality impacts from the proposed facility will be minimal.

(53) Transgulf provided a classification of vegetative and wildlife species occurring at the proposed site. The vegetation on site is basically characteristic of the area and consists primarily of mixed hardwood forests and pine. No rare or endangered plants, nor any endangered or threatened wildlife species are known to occur on site. The terminal project will remove some habitat as part of the site is cleared; however, no significant impact on wildlife populations in the area is expected because a considerable amount of naturally vegetated area will remain around the site.

(54) Potential archaeological and historical resources at and near the proposed site were appropriately evaluated. Two archaeological sites exist within the vicinity of the terminal: Site 8Gd296, located on site, which is a Weeden Island habitation site (A.D. 200 - A.D. 1,000) with no artifact concentration that is of National Register of Historic Places quality; and Site 8Gd108, which is an archaic lithic site located outside the terminal tract. A third site, 8Gd109, composed of two or three historic cemeteries and located outside and to the east of the proposed terminal tract may be eligible for National Register nomination, and, in any event, has importance to local residents. The cemeteries will not be destroyed as a result of the terminal's construction or operation; however a 100-foot buffer of natural woods will be maintained between the cemeteries and the proposed installation to provide a visual buffer. A chain

link fence to be covered with prolific native Carolina jasmine and Cherokee rose, along with an irrigation system to stimulate the rate of growth, will be placed inside a fifty-foot buffer adjoining the cemeteries, with an additional fifty-foot buffer inside the fence. This plan for the cemeteries is an appropriate mitigation concept. A fifty-foot buffer will also be retained at other boundaries of the proposed site to screen aesthetic impact.

(55) While the terminal itself will create no noise impacts on the local area, noise from the anticipated terminal traffic, approximately 150 tanker truck trips per day, will have some impact upon homes and churches in the immediate vicinity of the terminal. Noise increases will occur, especially during truck accelerations, but the expected levels are substantially below the Florida Department of Transportation's criteria for sensitive receptors.

Economic Impacts

(56) The Midway Terminal will be constructed in one phase and will require an average of approximately thirty persons over an estimated twelve month period of construction. The estimated payroll during construction is approximately $3.8 million. The payroll for the three permanent employees will be approximately $70,000 per year. The total improved value of the Midway Terminal facility and site is estimated at $10.7 million. The total improved value of other facilities Transgulf intends to place in Gadsden County if the Midway Terminal is approved is approximately $16.8 million, approximately $12.4 million of which will be expended on facilities that can be placed in counties other than Gadsden within the region. Thus, the total improved value of Transgulf's property in Gadsden County following approval of the Midway Terminal will be approximately $27.5 million.

(57) Gadsden County is a predominantly rural, revenue-poor county. Many homeowners in the County pay no ad valorem taxes because the value of their homes is less than the homestead exemption cap. The County's per capita tax revenue, adjusted for

inflation, was $112 in 1979 but had fallen to $95 by 1984, representing a drop of 15% in the ability of the County to provide goods and services to the public. Transgulf's $10.7 million terminal investment alone would increase the County's ad valorem tax base by 4%, resulting in an approximately $4.56 per capita increase in tax revenue or a total of $167,600 to $199,700 per year depending on the applicable millage rate. Transgulf's discretionary investment, if made in Gadsden County, would more than double that amount, and its total potential investment, including the pipeline conversion, would produce annual Gadsden County tax revenues of $432,000 or greater. These revenues are significant because Gadsden County is at the ten-mill constitutional cap on ad valorem taxes and its total tax base grew at a rate less than half that of the State as a whole from 1979 to 1984. Nonresidential investment is also a more effective producer of net ad valorem tax revenues than residential development, because the latter is subject to the $25,000 homestead exemption and typically generates a greater demand for public services.

(58) There will be no negative impact on fire insurance availability on rates to homeowners if the proposed terminal is built at Midway.

(59) Petroleum products presently arrive to the 12-County market area by way of longer truck trips from Panama City, St. Marks, Jacksonville, and Bainbridge, Georgia. The average price of liquid petroleum products within the market area is approximately 5 cents per gallon higher than the statewide average. Transgulf's Midway Terminal would be at the modal interface of major highway routes and the pipeline, as well as nearer the center of the market area. With increased competition, the price of petroleum products in the market area is likely to fall by 4.76 cents per gallon to approximately the statewide average. The resulting substantial savings to consumers in the region would be approximately $11 million per year. Because other means of transport could be expected to

adjust prices to meet the increased competition, it is anticipated that few, if any, jobs will be displaced in the region.

(60) Local government might incur some cost in the event of a fire or other emergency at the proposed Midway Terminal. The closest fire departments to the site are the Quincy Fire Department and the Havana Volunteer Fire Department, neither of which are trained or equipped for fighting petroleum fires. Even if they, or Tallahassee, should be called upon for aid or assistance, the self-sufficient fire prevention and fire fighting capabilities of the Midway Terminal would minimize the governmental costs of such services.

Impact on Public Facilities

(61) Neither public water facilities nor public sewer facilities will be relied upon at the Midway Terminal. The demand for electricity at the terminal can readily be handled by Talquin Electric Cooperative, Inc.

(62) The amounts of domestic trash will be small and disposed of through a public landfill. Any residue removed from storage tanks will be returned to a refinery for reprocessing or appropriately disposed of at a permitted disposal facility.

(63) Monitoring, security lighting and fencing will be provided to protect the proposed facility. Public health care facilities are available in Gadsden and Leon Counties for providing any needed emergency medical treatment. General first aid will be provided on site.

(64) As noted above, the Midway Terminal will be designed, constructed and operated to place minimal reliance and burden on public firefighting facilities. The covered, floating roof storage tanks remove the danger of lightning strikes or other ignition sources. Fire risks from tank overfills, should they occur, are minimized by graded dikes and combustible gas monitors. The truck loading area will have significant fire prevention features. If the redundant fire prevention systems were to fail, the automatic, self-contained systems at the tanks

and loading areas are designed to effectively extinguish a fire. If the automatic devices are not triggered for some reason, the fixed firefighting systems can be manually run without the need for further local firefighting equipment. A fifteen minute response time is not inadequate or inappropriate given the design and capabilities of this proposed terminal. Transgulf's design and self-sufficient approach to fire prevention and protection should enable it to control any potential fire on-site independent of local support. Transgulf is committed to provide fire safety training to local fire departments, its employees and truckers who utilize the facility; to develop detailed evacuation plans, and to enter mutual assistance agreements where helpful.

Public Transportation Facilities

(65) Trucks using the Midway Terminal will enter County Road 159 at its intersection with U.S. 90, and will then travel north approximately three quarters of a mile down County Road 159 to the entrance of the terminal site. After loading, the trucks will exit into County Road 159 and travel south to the U.S. 90 intersection where they will turn either northeast or southwest onto U.S. 90 in order to distribute the petroleum products to the market area. Transgulf has agreed to provide, at its own costs, certain transportation improvements to County Road 159 to bring it from a second class to a first class road. These improvements include the repaving and widening of County Road 159 from the site entrance to U.S. 90 and the construction of acceleration and deceleration lanes at the site entrance. Transgulf has also agreed to the installation of a flashing beacon, advance warning and yield signs and geometric improvements to the intersection of County Road 159 and U.S. 90, warning signs on County Road 159 and a sign restricting truck traffic from using the roadway north of the site. In addition, Transgulf has committed to provide Orval Pettis, who resides and conducts his business south of the site but travels north across a portion of the site to County Road 159, a new driveway connecting his property to County Road 159, should he desire this improvement.

(66) Total truck mileage for the delivery of liquid petroleum products within the anticipated market area will actually decrease as a result of the Midway Terminal location, thus lessening the impact on public highways. With the improvements to County Road 159 agreed to be undertaken by Transgulf at its own expense, existing regional and local transportation facilities have the capacity to accommodate the volumes of truck traffic associated with the proposed terminal.

Housing

(67) The proposed Midway Terminal should have no impact on either the temporary or permanent demand for housing in the area.

Energy Resources

(68) The location of the liquid petroleum storage and loading facility at the proposed site will ensure more adequate and reasonably priced gasoline and other energy supplies for the 12-county market area. Truck transportation from more distant, existing sources of supply will be reduced, thus conserving energy. Location of the terminal near the pipeline also minimizes the energy consumed in pumping. Further, the air pollution control equipment proposed for the facility will significantly reduce vapor loss and save quantities of petroleum products.

CONCLUSIONS OF LAW

An applicant for approval of a development of regional impact (DRI) must demonstrate that the proposed project meets the applicable statutory criteria for approval. The project need not be impact-free. Rather, the DRI process is one of balancing favorable and unfavorable regional impacts based upon all the evidence. Graham v. Estuary Properties, Inc., 399 So.2d 1374 (Fla. 1981).

The intervenors in this proceeding have contended that Transgulf is not entitled to approval of its proposed Midway Terminal for several reasons. First, it is urged that denial is

mandated because Transgulf has no ownership or other legal interest in the land for which a DRI is proposed. Second, it is argued that the original application for development approval (ADA) was not sufficient or complete and that further information and changes in the project cannot be supplied or considered during the de novo hearing on the proposed project. It is also contended that in order to overturn or reverse a local government decision in the DRI process, an overriding regional public interest must be established. Intervenor Dover strongly argues that the resolution of this case is a land use decision and that the Florida Land and Water Adjudicatory Commission must not substitute its judgment for the County's decision in its capacity as a land use planner. Finally, the intervenors urge that the adverse impacts with regard to public safety and environmental concerns far outweigh any local or regional benefit to be derived from the proposed project, thus mandating denial of the application.

Ownership of the property is not essential to the submission of an application for development approval. There is no requirement in Chapter 380, Florida Statutes, that an applicant have an ownership or other legal interest in the land for which a DRI is proposed. Indeed, "owner" and "developer" are recognized as separate entities by Section 380.07(2), Florida Statutes, and the definition of "developer" in Section 380.031(2), Florida Statutes, does not include the requirement of property ownership.

Transgulf has adequately demonstrated that it has the potential to acquire the subject 51-acre parcel of land either through a negotiated purchase or an exercise of the power of eminent domain, pursuant to Section 361.06, Florida Statutes. That statute confers upon duly incorporated petroleum product pipeline companies all rights of eminent domain for the purposes of

> "acquisition of rights-of-way for the installation, operation, maintenance, repair and replacement of its pipelines and all structures, pumping stations and other installations and works incident thereto."

Whether or not the storage terminal constitutes a "structure" or "other installations and works incident" to the pipeline is not an appropriate issue to be determined in this proceeding. It is sufficient that Transgulf has adequately demonstrated its potential ability to obtain ownership of the land in question. A development order can be appropriately conditioned upon Transgulf's acquisition of the proposed site, so as not to unduly restrict the future use of the land for other purposes should such acquisition not occur within a reasonable period of time.

The issue of the completeness or sufficiency of the original ADA submitted by Transgulf in 1978 is, at this point in time, irrelevant to a disposition of the issues in this proceeding. It is the responsibility of the regional planning agency, not the local government or the Florida Land and Water Adjudicatory Commission, to determine whether an ADA is sufficiently complete for it to discharge its responsibilities. Section 380.06(9), Florida Statutes. The Apalachee Regional Planning Council fulfilled its responsibilities by first requesting additional information, and then notifying Gadsden County on December 18, 1978, that a public hearing could be set. This constituted a determination by the ARPC that the application was sufficient for it to discharge its responsibilities (See Section 380.06(10), Florida Statutes), and the correctness of this determination can not be challenged some six and one-half years later.

The intervenor Dover further contends that because of the changes in design of the project between the time of Transgulf's original application and the commencement of this administrative proceeding over six years later, the whole matter must somehow be resubmitted to the ARPC for review. This contention is likewise without merit. First, given the lapse of

time that has occurred, it was absolutely proper, indeed necessary, for Transgulf to update and refine its proposed project in light of technological and regulatory changes, its experiences with a similar project in Kissimmee, Florida and awareness of the concerns of the parties in this proceeding. The "substantial deviation" provisions of Chapter 380.06(17) apply only to changes to a "previously approved" DRI, and not to an original application progressing through the review process. Indeed, the DRI process in its entirety contemplates changes, additions and/or modifications to an original proposal. In balancing the interests required by statute, compromises, conditions and modifications are permissible as long as the record contains evidence supporting the changes, Section 380.07(4), Florida Statutes, and Graham v. Estuary Properties, Inc., supra. The evidence adduced in this proceeding sufficiently details Transgulf's terminal proposal and its predicted impacts so as to perform the balancing required for determination. It should be noted that neither the ARPC nor the Department of Community Affairs, though noticed of these proceedings, has sought to intervene as parties. Gadsden County has been a party in the proceeding since 1979, and has had the opportunity to apprise itself fully of the plans for the proposed terminal proceeding.

The intervenor Dover next contends that the decision of Gadsden County, as expressed in its Order denying development approval, can not be set aside in the absence of some overriding regional public interest, and that deference should be given to the County's land use decision in this case and overruled only if an abuse of discretion can be demonstrated.

While the instant administrative proceeding is designated by statute as an "appeal" (Section 380.07 Florida Statutes), it is not an "appeal" in the usual technical sense and there is no presumption of correctness to the Order from which the appeal is taken. This is made clear in Section 380.07(3), Florida Statutes, which mandates the conduct of a hearing

pursuant to the provisions of Chapter 120, Florida Statutes. The Order "appealed" then becomes the preliminary agency action and the Chapter 120 proceeding, if timely sought, is intended to formulate the final agency action, and not to review the action taken preliminarily. McDonald v. Department of Banking and Finance, 346 So.2d 569 (Fla. 1st DCA, 1977).

In this de novo proceeding, each party, including the County, is given the opportunity and responsibility to develop and demonstrate, with various shifting burdens of proof, its respective position concerning the issues for determination. Transgulf had the initial burden of going forward and the continuing ultimate burden of establishing that its proposal met the statutory criteria for approval. The burden then shifted to the other parties, including the County, to demonstrate that the proposal would have adverse regional impacts or would be inconsistent with state or local land development plans or regulations, whereupon the burden shifted back to Transgulf to show how any proven adverse impact or nonconsistency could be avoided or mitigated. In this proceeding, no special weight attaches to Gadsden County's initial Order of denial, and its position on the matter, like the position of the other parties, is subject to proof adduced at the hearing.

The statutory scheme for DRI reviews, as set forth in Section 380.06, Florida Statutes, requires that the regional planning agency identify regional issues based upon enumerated criteria and make recommendations to the local government. Proposals must be evaluated and recommendations must be made in consideration of whether, and the extent to which:

> "1. The development will have a favorable or unfavorable impact on the environment and natural resources of the region.
> 2. The development will have a favorable or unfavorable impact on the economy of the region.
> 3. The development will efficiently use or unduly burden water, sewer, solid waste disposal or other necessary public facilities.
> 4. The development will efficiently use or unduly burden public transportation facilities.
> 5. The development will favorably or adversely affect the ability of people to find adequate

housing reasonably accessible to their places of employment.
6. The development complies with such other criteria for determining regional impact as the regional planning agency deems appropriate, including, but not limited to, the extent to which the development would create an additional demand for, or additional use of, energy, provided such criteria and related policies have been adopted by the regional planning agency pursuant to s. 120.54. Regional planning agencies may also review and comment upon issues which affect only the local government entity with jurisdiction pursuant to this section; however, such issues shall not be grounds for or be included as issues in a regional planning agency appeal of a development order under s. 380.07." Section 380.06(11)(a), Florida Statutes.

Chapter 380 further requires local governments to consider and determine whether, and the extent to which

"(a) The development unreasonably interferes with the achievement of the objectives of an adopted state land development plan applicable to the area;
(b) The development is consistent with the local land development regulations; and
(c) The development is consistent with the report and recommendations of the regional planning agency submitted pursuant to subsection (11)." Section 380.06(13), Florida Statutes.

Applying these statutory standards to the totality of the evidence adduced at the hearing, it is clear that Transgulf is entitled to approval, with certain conditions, of its proposed Midway Terminal project. With certain conditions of construction and operation, to which Transgulf has agreed, the proposed facility should have no significant impact upon local or regional surface water, groundwater, ecological, geological, biological archaeological or historical resources. The retention of water drawn from tank bottoms within the lined diked areas for a period of at least seven days will prevent the discharge of dissolved organic compounds into surface waters or groundwaters. The retention pond will be sized and designed so as to permit discharges on an infrequent basis of only four or five times per year, and only from a point at least 50 feet within the site boundaries. A groundwater monitoring system tailored to this site and in accordance with applicable federal and state

regulations would allow remedial steps to be taken should conditions warrant. These mitigating features, along with the plans and design for the facility, should adequately protect groundwater and surface water resources within the area. The increase in noise levels immediately adjacent to the facility and along County Road 159 was not proven to be unreasonable, and there should be no significant unfavorable impact upon local or regional air quality. The 100-foot buffer between the cemeteries and the terminal will maintain the sanctity of these areas and will, along with the 50-foot buffer around the entire site, provide a visual screening for aesthetic purposes. In sum, neither the environment nor the natural resources of this area will be adversely affected by the proposed Midway Terminal.

The impact of the project upon the economy of both the region and Gadsden County will be substantially favorable. Consumers of liquid petroleum products will realize cost savings and the County will receive substantial tax revenues from the placement of the facility in Gadsden County. The fact that these same economic benefits might be realized at another site within Gadsden County is not relevant and not determinative of any issue in this proceeding. First, Transgulf has not applied to locate its terminal at any other site within Gadsden County. And second, the evidence demonstrates that alternative sites, both within and without Gadsden County, have been evaluated and the subject Midway site was determined to be superior.

The evidence demonstrates that the proposed terminal facility is designed to be significantly self-contained and self-sufficient. As such, it will efficiently use and will not create any significant burden upon local or regional water, sewer, solid waste, electric, firefighting, public safety or public health facilities. Based upon Transgulf's self-contained fire prevention, detection and fighting system, with redundant backup capabilities, it is highly unlikely that a significant fire at the site will occur and even more unlikely, if a fire does occur, for it to escape the premises of the terminal. Transgulf has

agreed to place the storage tanks at least one tank diameter away from the inside area of the vegetated buffer areas. Also, each tank will be surrounded by either individual dikes or intermediate dikes within a common area. Transgulf has committed itself to utilizing state-of-the-art equipment and techniques and to comply with or exceed all fire prevention and safety regulations. The entire concept and plans for this project are to mitigate any danger from fire to the greatest extent possible.

The Midway Terminal is located nearer the market area than existing sources of petroleum products and the major arterial highways (U.S. 90 and Interstate 10) are capable of handling the expected traffic utilizing the terminal. Regional truck traffic on minor, less improved roads will decrease as a result of the closer source of supply. While County Road 159 would be burdened if unimproved between the terminal's driveway and its intersection with U.S. 90, Transgulf has agreed to make all necessary improvements at its own expense. As such, regional transportation facilities will be less burdened and local transportation facilities will be improved.

The accessibility of housing in the area will not be affected by the proposed Midway Terminal.

With regard to energy resources, the proposed facility will make sources of energy available to consumers in the region at lower costs and will create energy savings from reduced truck miles.

There is no inconsistency between the proposed Midway Terminal and the State Comprehensive Plan. Other than its comprehensive plan, Gadsden County has no local land development or zoning regulations applicable to the proposed Midway site. In spite of the fact that this proceeding has been pending since 1978, the County has not elected to zone this area for residential use and has, indeed, permitted commercial and industrial uses in the vicinity of the proposed site. The existence of the Midway Terminal will be in general compliance with the broad policy directives of the Gadsden County

Comprehensive Plan and will be generally compatible with the mixture of land uses that has developed in the area surrounding the proposed site. The County has failed in this proceeding to present any competent substantial evidence that the location of the terminal at the proposed site would be contrary to any local land use plans or regulations.

Finally, the development as proposed by Transgulf is consistent with, and indeed exceeds, the recommendations and conditions suggested by the Apalachee Regional Planning Council, which recommended approval.

In balancing the statutory criteria discussed above, it can readily be determined that the proposed development of the Midway Terminal meets the statutory criteria for approval, with certain conditions. Transgulf has adequately demonstrated that it intends to design, construct and operate the proposed storage and loading facility in such a manner that any local or regional impacts resulting therefrom will be of either a favorable or an insignificant nature. Transgulf has amply demonstrated its willingness and ability to take appropriate measures to mitigate any potential adverse impacts which may arise from the facility's construction and operation.

RECOMMENDATION

Based upon the findings of fact and conclusions of law recited herein, it is RECOMMENDED that the Florida Land and Water Adjudicatory Commission enter a Final Order approving Transgulf's proposed liquid petroleum products storage and truck loading terminal near Midway, subject to the following conditions:

(1) In coordination with the Gadsden County Engineer and the Florida Department of Transportation; Transgulf shall make and bear the expense of the following road improvements:

(a) a flashing beacon at, and the geometric improvement of the intersection of U.S. 90 and County Road 159, and advance warning and yield signs to that intersection;

(b) the reconstruction and widening of County Road 159 from Transgulf's driveway to U.S. 90, and the construction of acceleration and deceleration lanes at the site entrance;

(c) The installation of warning signs alerting drivers of the site entrance, as well as a sign restricting truck traffic from using the roadway north of the site; and

(d) a driveway for Mr. Orval Pettis which provides him access to County Road 159 from his property, if he so desires.

(2) A fifty-foot buffer of trees shall be maintained around the entire perimeter of the site, with an additional fifty-foot buffer of trees adjacent to the cemetery sites.

(3) There shall be a distance of at least one storage tank diameter between any tank and the inside edge of the vegetative buffer.

(4) Water withdrawn from tank bottoms shall be retained within the diked areas for a period of at least seven days prior to discharge.

(5) The retention pond shall be sized so as to hold at least 1.7 million gallons of water and located so as to ensure that any discharge occurs only from a point or points located at least 50 feet within the site boundaries.

(6) A reliable and site-specific groundwater monitoring system shall be installed in cooperation with the Department of Environmental Regulation so as to monitor all potential source areas at multiple depths and to cover all boundaries of the site.

(7) Each storage tank shall be surrounded by either an individual and separate dike or intermediate dikes within a diked area.

(8) The facility shall be finally designed, constructed and operated so as to provide a self-contained and self-sufficient fire prevention, fire detection and firefighting system.

(9) A detailed evacuation plan for the terminal facility and residents along St. Johns Church Road shall be developed in cooperation with local fire and law enforcement departments, and Transgulf shall provide at is expense needed fire safety training to local fire departments and pursue the

entering of mutual assistance agreements which may promote the safety of the terminal and the surrounding areas.

(10) The approval granted by this Order is expressly conditioned upon and is of no force or effect until such time as, or at the end of three years from the date of the Final Order, whichever first occurs, Transgulf acquires legal ownership of the proposed Midway terminal site.

Respectfully submitted and entered this 12th day of November, 1985, in Tallahassee, Florida.

Diane D. Tremor

DIANE D. TREMOR
Hearing Officer
Division of Administrative Hearings
The Oakland Building
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Filed with the Clerk of the
Division of Administrative Hearings
this 12th day of November, 1985.

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APPENDIX

The proposed findings of fact submitted by the petitioner Transgulf Pipeline Company and the intervenor Henry Baker Dover have been accepted and incorporated in this Recommended Order, except as noted below:

Transgulf

40.	Rejected; irrelevant and immaterial.
43.	Rejected; as irrelevant and immaterial.

Dover

27.	Rejected; not supported by competent substantial evidence.
28.	Rejected; irrelevant and immaterial.
30-32.	Rejected; not dispositive or material in light of Finding of Fact 41.
59.	Rejected; contradicted by other competent substantial evidence.
64.	Rejected; contradicted by other competent substantial evidence.
78-81.	Rejected; irrelevant and immaterial and constitutes legal conclusions as opposed to factual findings.
90.	Rejected; contradicted by other competent substantial evidence.
99.	Rejected; not dispositive of any substantive issue in this proceeding.
102.	Rejected in part as constituting a legal conclusion as opposed to a factual finding.
115.	Rejected; contradicted by other competent substantial evidence.

The CHAIRMAN. This hearing is adjourned.

[Whereupon, at 1:15 p.m., the committee adjourned, subject to the call of the Chair.]

59-818 (164)